LD7095.5
R625

MHC Organizations WMHC: Freavery, Electricity, + Equipment Charge Records + FCC Forms
1971-1973

Box 10 folder 1

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Proposal For Frequency Change of WMHC,
Mt. Holyoke College Radio

WAMF, Amherst College Radio, Proposes that WMHC change frequency from 90.7MHz (FM channel 214) to 91.5MHz (FM channel 218) for the following reasons:

1) In order to permit the establishment of a ten thousand watt educational FM station in Albany, N.Y. (proposed call letters: WMHT), WAMF (Amherst College) has agreed to move frequencies. For WAMF to move however, we must effect some changes in the current FM educational band frequency assignments. Without these changes, we (WAMF) can't allow WMHT to go on the air because we will have no frequency to move to.
2) While investigating the present frequency assignments, Edward F. Perry, Jr. (203 Pond St., Natick, Mass. 01760), the engineering consultant for WAMF and WSCB (Springfield College Radio) has constructed a plan for new frequency assignments which would be of benefit to all involved (see accompanying sheet).
3) WMHC (Mt. Holyoke) currently holds the key frequency in the proposed plan. Their move would permit all of the frequency changes outlined on the accompanying sheet.
4) As a result of the frequency changes made some years ago when WFCR (Five College Radio) was established, Mt. Holyoke was assigned to an illegal channel. That is, they are currently operating on a frequency which (by virtue of Mt. Holyoke's location) is within the "protected area" of a long established college station in New York State. The proposed frequency change for Mt. Holyoke will put them on a legal channel.
5) The new frequency for WMHC will allow them to increase power beyond their present 10 watts. Such an increase will soon be impossible on their present frequency once the University of Massachusetts Radio Station (WMUA) achieves the power increase which has already been applied for from the Federal Communications Commission. Such a power increase for WMHC may be necessary should the Federal Communications Commission begin weeding the airwaves of ten watt stations as they have informally proposed to do.

WAMF proposes the following method of paying for the frequency change of WMHC:
1) Springfield College (WSCB) has already contracted with Edward F. Perry to provide all necessary engineering reports and exhibits for the Federal Communications Commission.
2) WAMF agrees to pay up to $350.00 for the cost of a new antenna and crystal for WMHC's new frequency. The actual cost of these parts should not exceed $275.00 according to our consultant's rough estimate, so that $350.00 should more than cover engineering expenses.

Respectfully Submitted,
William C. Jacob, Jr.
William C. Jacob, Jr.
General Manager of WAMF
Amherst College Radio

You received a copy of this with cover letter last December. In case it was misplaced, please accept this copy, of poorer legibility since we don't have the original either, to help put the matter in perspective.

Edward F. Perry, Jr.
Broadcast Engineering Consultant
203 Pond Street
Natick, Massachusetts 01760
617-548-3102

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WCIB

Larry Watson

PROPOSED CHANGES IN EDUCATIONAL FM BROADCAST BAND

Station or Applicant	Present Frequency	Potential Power with Present Antenna Height	Proposed Frequency	Proposed Max Potential Power with Present Antenna Height
WAMF - Amherst	89.5 MHz	20 kw	89.3 MHz	50 kw
WRTC - Trinity	89.3 MHz	350 watts	88.9 MHz	17.5 kw*
St. Thomas Seminary	88.9 MHz	6 kw**	89.9 MHz	10 kw
WSCB - Springfield	89.9 MHz	25 kw	90.7 MHz	50 kw
WMHC - Mt. Holyoke	90.7 MHz	10 watts	91.5 MHz	100 watts
WWEB - Choate School	90.1 MHz	10 watts	90.9 MHz	10 watts
New Haven College	88.7 MHz	3 kw**	88.7 MHz	550 watts
Quinnipiac College	88.7 MHz	10 watts**	88.3 MHz	10 watts

****

* Maximum power at present location, however, use of 25 kw is possible at a site approximately one mile south of present site.

** Mutually exclusive applications, only one of which can be granted unless the applications are revised to eliminate mutual interference.

Adoption of these proposed changes will also make possible construction of a new 10 kw educational station to serve the Albany, New York area.

RADIO BROADCAST CONSULTING
- FREQUENCY SEARCHES
- NEW APPLICATIONS
- POWER INCREASES
- PROOFS OF PERFORMANCE

BROADCAST ENGINEERING SERVICES
- CONTRACT ENGINEERING
- STATION CONSTRUCTION
- EMERGENCY REPAIRS

DESIGN, SALES, INSTALLATION & SERVICE
- DETECTION AND SIGNALING DEVICES
- INTERCOMMUNICATIONS SYSTEMS
- TELECOMMUNICATIONS SYSTEMS AND AUTOMATIC SWITCHBOARDS

March 10, 1971

Memo to: Miss Tuttle

From: Purchasing Agent

Station WAMF at Amherst has asked Mount Holyoke to change radio frequency in a series of moves to enable Amherst and Springfield College to increase potential power. They have offered to underwrite our expenses up to $350.00

The proposed change would give us a maximum potential power of 100 watts.

Mount Holyoke would like to know if there is anything we could do which would allow expansion to 1 KW, while complying with this request.

It has been suggested that we employ a consultant other than Mr. Perry who has been retained by Amherst and Springfield. It has been pointed out that someone who had a personal interest in Mount Holyoke would be desirable.

March 10, 1971

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March 24, 1971

Mr. Ray R. Paul, Attorney
815 15th Street, N.W.
Washington, D. C. 20005

Dear Mr. Paul:

Thank you for your interest in Mount Holyoke College and for your very kind offer to look into the matter of a change of frequency for our Radio Station, WMHC.

This will be authorization for you to represent Mount Holyoke College in this change of frequency which has been suggested by Amherst College.

Sincerely yours,

MOUNT HOLYOKE COLLEGE

Mary C. Thornton (Miss)
Purchasing Agent
MCT/dm

cc: Miss Tuttle

March 24, 1971

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815 15th Street, N.W.
Washington, D. C. 20005

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Sincerely yours,

MOUNT HOLYOKE COLLEGE

Mary C. Thornton (Miss)
Purchasing Agent
MCT/dm

cc: Miss Turtle

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

File No.: BPED-[illegible]
Call Letters: [illegible]

FM BROADCAST STATION CONSTRUCTION PERMIT

Subject to the provisions of the Communications Act of 1934, subsequent Acts, and Treaties, and Commission Rules made thereunder, and further subject to conditions set forth in this permit, authority is hereby granted to

UNIVERSITY OF MASSACHUSETTS

to construct an FM broadcast station located and described as follows:

1. Station location: Amherst, Massachusetts
2. Transmitter location:
   University of Massachusetts
   Emily Dickinson Hall
   Amherst, Massachusetts
   North Latitude: Degrees 42 Minutes 23 Seconds 31
   West Longitude: Degrees 72 Minutes 31 Seconds 13
3. Main studio location:
   University of Massachusetts
   Engineering Bldg
   Amherst, Massachusetts
4. Description of transmitter: CCA, Type No. FM-1000DS.

(or other transmitter currently listed in the Commission's "Radio Equipment List, Part B, Aural Broadcast Equipment" for the power output herein authorized and, if applicable, for stereophonic and SCA operation).

5. Description of antenna system:
   ANTENNA: CCA, Type No. ISA-6S10, 4 sections.
   ANTENNA SUPPORTING STRUCTURE: FM antenna to be side-mounted on a uniform cross section tower on the roof of Emily [illegible].
   OVERALL HEIGHT ABOVE GROUND: 120 feet.

   Transmitter may be operated by remote control from the Engineering Building, University of Massachusetts, Amherst, Massachusetts.

6. Operating assignment:
   (a) Frequency 91.1 Megahertz.
   (b) Transmitter output power [illegible] watts.
   (c) Effective radiated power [illegible] watts (horizontal & vertical)
   Antenna height above average terrain [illegible] feet (horizontal & vertical)
   (d) Hours of operation - Unlimited
   Date of required commencement of construction [illegible]
   Date of required completion of construction [illegible]
7. Equipment and program tests shall be conducted only pursuant to Sections 73.286 and 73.317 of the Commission Rules.
8. This permit shall be automatically forfeited if the station is not ready for operation within the time specified or within such further time as the Commission may allow unless completion of the station is prevented by causes not under the control of the permittee. See Section 1.308 of the Commission Rules.

This construction permit consists of this page and page [illegible].

Dated: March 22, 1971

FEDERAL COMMUNICATIONS COMMISSION

[illegible]

MAR 26 1971

[illegible] WASHINGTON, D. C.

FCC Form 340 | FEDERAL COMMUNICATIONS COMMISSION | Section V-b

FM ENGINEERING DATA | Name of applicant: University of Massachusetts | FOR COMMISSION USE ONLY | File No.

1. Purpose of authorization applied for:

☐ Construct a new station ☒ Make changes in authorized radio station

If this is not for a new station, summarize briefly the nature of the changes proposed.

Change transmitter location, increase power, increase antenna height. (Concurrent application to designate present facilities as auxiliary.)

2. Facilities requested

Frequency	Transmitter power output
91.1 mc	0.475KW

3. Proposed transmitter location

State	County	City
Massachusetts	Hampshire	Amherst

Street Address (or other identification)

University of Massachusetts
Emily Dickinson Hall

Remote control point location

State	City or town
Massachusetts	Amherst

Street Address (or other identification)

University of Massachusetts
Engineering Building

4. Proposed location of main studio

State	County
Massachusetts	Hampshire

City or town: Amherst

Street Address: Engineering Building

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Other studios proposed

None

5. Transmitter

Make: CCA

Type No.	Rated Power
CCA-1000 DS	1 kw

(If the above transmitter has not been accepted for licensing by the F.C.C., attach as Exhibit No. a complete showing of transmitter details. Showing should include schematic diagram and full details of frequency determining and modulating circuits. If transmitter is licensed, give call letters and give full details of change.) Does not apply

6. Transmission line proposed to supply power to the antenna from the transmitter

Type No.	Description
HJ7-50A	Heliax

Length	Loss in db per 100 feet at operating frequency in megacycles	Loss in percent for this length
50		98

7a. Antenna structure

Is the proposed construction in the immediate vicinity or does it serve to modify the construction of any standard broadcast station, FM broadcast station, television broadcast station, or other class of radio station? ☐ Yes ☒ No

If "Yes", attach as Exhibit No. complete engineering data thereon.

Submit as Exhibit No. a certified plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features.

See Engineering Report

Overall height in feet above ground. (Without obstruction lighting)	Overall height in feet above mean sea level. (Without obstruction lighting)
119.5	483
Overall height in feet above ground. (With obstruction lighting)	**Overall height in feet above mean sea level. (With obstruction lighting)**
122.5	486

Height of antenna radiation center in feet above mean sea level.

463

Geographical Coordinates of Antenna (To nearest second)

North Latitude 42° 23' 31" West Longitude 72° 31' 13"

b. Antenna data

Make	Type No. or description	No. of sections
CCA (Saivelv)	FMA-6810	4

Effective free space field intensity at one mile in mv/m for one kilowatt antenna input power	Antenna field gain	Antenna power gain
202	H: 1.47 V: 1.47	H: 2.15 V: 2.15

Is horizontal polarization proposed? ☒ Yes ☐ No

If "No", attach as Exhibit No. complete engineering data on the antenna and the effective radiated power proposed.

Is directional antenna proposed? ☐ Yes ☒ No

If "Yes", attach as Exhibit No. complete engineering data thereon.

9. Attach as Exhibit No. See Engineering Report a map(s) (topographic where obtainable, such as U.S. Geological Survey quadrangles) for the area within 15 miles of the proposed transmitter location and showing drawn thereon the transmitter and main studio locations accurately plotted.

9. Attach as Exhibit No. a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to show the nature of the terrain in the vicinity of the proposed transmitter site. The photographs should be marked so as to show compass directions. If photographs cannot be obtained in different directions from an elevated point on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown. Give date photographs were taken.

Does Not Apply

NOTE: The information requested below in paragraphs 10, 11, 12, 13 and 14, need only be completed by those stations proposing to use transmitters with power ratings in excess of 10 watts.

10. Proposed operation

Transmitter power output in kilowatts	Power dissipation within transmission line in kilowatts
0.475	0.010
Antenna input power in kilowatts	**Effective radiated power in kilowatts**
0.465	1.000 1.000

11. Modulation monitor

Make	Type No.
McMartin	TBM-4500A

12. Frequency monitor

Make	Type No.
McMartin	TBM-3000A

13a. On the topographic map required by Paragraph 2, show drawn thereon the following data:

(1) Transmitter location and call letters of all known radio stations (except [illegible] location of established commercial and government receiving [illegible] within 2 miles of the proposed transmitter location;

(2) Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature;

(3) At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location.

See Engineering Report

b. Attach [illegible] profile graphs for the radials in (a) (3) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction due north shall be zero azimuth and angles measured clockwise. Show source of topographical data on each. Show [illegible].

See Engineering Report

14. From the profile graphs in 13(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the FM Technical Standards, supply the following tabulation of data. (If proposed location is adjacent to the sea coast or the Great Lakes omit from this tabulation all radials which lie over water substantially the entire distance between two miles from the proposed transmitter location and the predicted 50 microvolt per meter contour.)

Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10-mi.)	Free space field intensity in millivolts per meter at one mile	Predicted distance in miles to the 1 mv/m contour	Predicted distances in miles to the 50 uv/m contour
0	feet	feet	mv/m	mi.	mi.
		See Engineering Report			

Antenna height above average terrain [illegible] feet

(Average of above listed heights)

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Date [illegible]

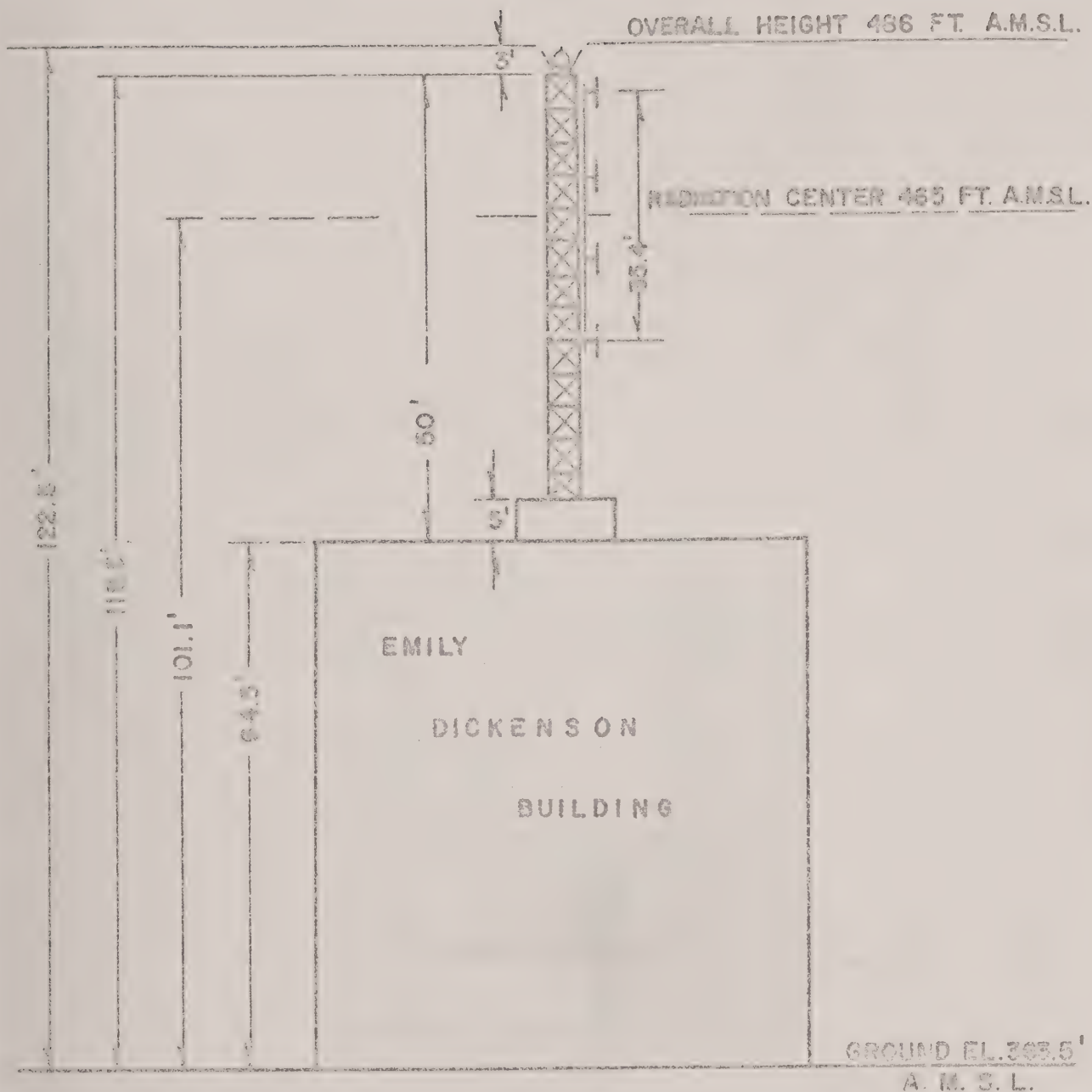
Signature [illegible]

(Check appropriate box)

[ ] Technical Director [ ] Other

[ ] Registered Professional Engineer

[X] Consulting Engineer



N. LAT. 42° 23' 31"
W. LONG. 72° 31' 13"

EXHIBIT B

ELEVATION OF ANTENNA
PROPOSED OPERATION OF WMUA
CH. 216 (91.1 MC) 1.0 KW (H&V) 27 FT.
AMHERST, MASSACHUSETTS

KEAR and KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D.C.

NOT TO SCALE

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F C C
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TABLE OF CONTENTS

Affidavit

Exhibit A Engineering Statement

Exhibit B Elevation of Antenna

Exhibit C Terrain Study Maps

Exhibit D Terrain Profile Graphs

Exhibit E Tabulation of Elevations and Contour Distances

Exhibit F Map of Predicted Service Contours

FCC Form 340, Section V-B

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A F F I D A V I T

CITY OF WASHINGTON)
) SS
DISTRICT OF COLUMBIA)

Neil M. Smith, having been duly sworn, deposes and says that:

1. He is a qualified engineer engaged in consulting engineering in the City of Washington, District of Columbia; he is a member of the firm of Kear and Kennedy; and his qualifications are a matter of record with the Federal Communications Commission.

2. The firm of Kear and Kennedy has been retained by the University of Massachusetts, licensee of Non-Commercial FM Broadcast Station WMUA, Amherst, Massachusetts, to prepare the engineering portion of its application for Construction Permit specifying changes in power, antenna height, and transmitter location.

3. He has prepared, or caused to be prepared under his immediate supervision, the attached Engineering Report.

4. The foregoing statements and the attached exhibits are true and correct of his own knowledge, except such statements as are on information and belief and to such statements, he believes them to be true.

NEIL M. SMITH

Subscribed and sworn before me this 17th day of Oct., 1970.

NOTARY PUBLIC, D.C.

My Commission expi.
October 1, 1970

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Exhibit A

ENGINEERING STATEMENT

The engineering data contained herein has been prepared on behalf of the University of Massachusetts, licensee of Non-Commercial FM Broadcast Station WMUA, Amherst, Massachusetts, in support of its application for Construction Permit specifying changes in power, antenna height, and transmitter location.

WMUA presently operates as a Class D station, with transmitter power output of 10 watts, on 91.1 mc (Channel 216). On that same frequency, it is proposed that transmitter power be increased to 0.475 kw, which, with the proposed four-section circularly-polarized antenna, will result in an effective radiated power of 1.0 kw in both the horizontal and vertical planes. The transmitter and antenna are to be installed at a new location which will provide greater effective height, and these facilities are to be operated by remote control from the main studios at which the present transmitter is located. Concurrent with the instant application, WMUA is filing a separate application to designate the present facilities as an auxiliary transmitter and antenna.

Exhibit B is a sketch of the proposed antenna and supporting structure. Exhibit C includes topographic maps showing the terrain in the vicinity of WMUA, from which the profile graphs in Exhibit D have been prepared. A tabulation of elevations and contour

distances and a map of predicted service contours are included as Exhibits E and F. (In the four instances in which the effective height was negative or less than 100 ft., the use of the 100 ft. curves was considered appropriate, except on the 90° T radial, for which the contour distances have been assumed to be terrain-limited.)

An allocations study has been made by this office to establish that the proposed operation would result in no prohibited contour overlap, as specified in Section 1.573 of FCC Rules. The following tabulation sets forth the pertinent results of that study:

		Separation (Mi.)	
Channel	Most Critical Assignment	Required To Avoid Prohibited Overlap	Actual
213	WICN, Worcester, Mass.	9	38
214	WMHC, South Hadley, Mass.	9	10
215	WBUR, Boston, Mass.	36	72
216	WSHU, Fairfield, Conn.	50	84
217	WWUH, West Hartford, Conn.	20	42
218	WRPI, Troy, New York	24	63
219	WHUS, Storrs, Conn.	14	41.5

These mileages are based on authorized ERP and average antenna height above average terrain for each station. It may be seen that the allowable distances are exceeded by a substantial amount, with the exception of the separation between proposed WMUA

and WMHC. In this case there is approximately a one-mile difference between the required spacing and the actual spacing. In order to firmly establish the absence of prohibited overlap with this station, certain more detailed studies were made.

WMHC is located on the campus of Mount Holyoke College. Reference to that station's license file indicates that the listed coordinates (42-16-01, 72-34-07) are slightly in error. Based on the clearly marked aerial photograph in the most recent application of WMHC, the coordinates of that station, on the laboratory theater building, are 42-15-09, 72-34-34.

On the topographic maps in Exhibit C is shown the location of WMHC, as well as a radial from proposed WMUA on a bearing of 196.5° T, which passes directly through the WMHC site. The profile for this radial is shown in Exhibit D, and contour computations along that path are included in Exhibit E.

The distance from proposed WMUA to WMHC, calculated in accordance with Section 73.208 of FCC Rules, is 10.04 miles. The distance to the proposed WMUA 60 dbu contour, toward WMHC, is 9.0 miles. Assuming no transmission line loss, transmitter power output of 10 watts, and unity antenna power gain (as per the WMHC license file), one calculates an effective radiated power of 10 watts which means that the 80 dbu contour of WMHC would extend somewhat less than

1 mile from its transmitter site. (In point of fact, since WMHC utilizes a dipole transmitting antenna, with a minimum oriented approximately toward WMUA, its 80 dbu contour would not extend even that far in the critical direction.) These data therefore show that the WMUA 60 dbu contour distance (9.0 mi.) plus the WMHC 80 dbu contour distance (<1.0 mi.) is less than the actual distance between the two stations, meaning that no prohibited contour overlap could possibly exist. (See Exhibit F)

Since the proposed construction is not such as to require notice to the FAA, such notice has not been filed, nor has section V-G of FCC Form 340 been included herein. It is believed that the proposed operation of WMUA is in compliance with both the existing Rules of the FCC and the interim processing procedures specified therein.

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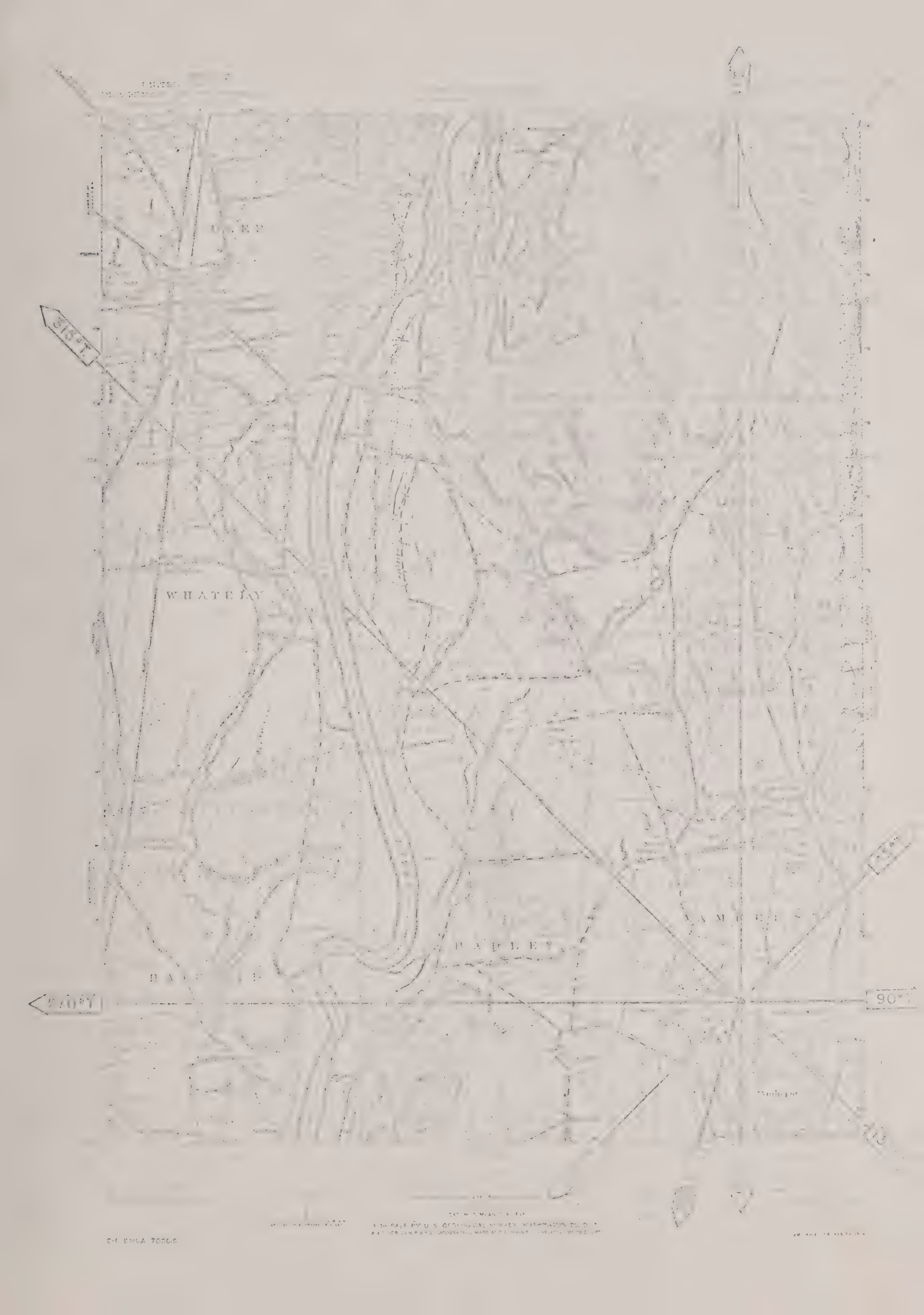
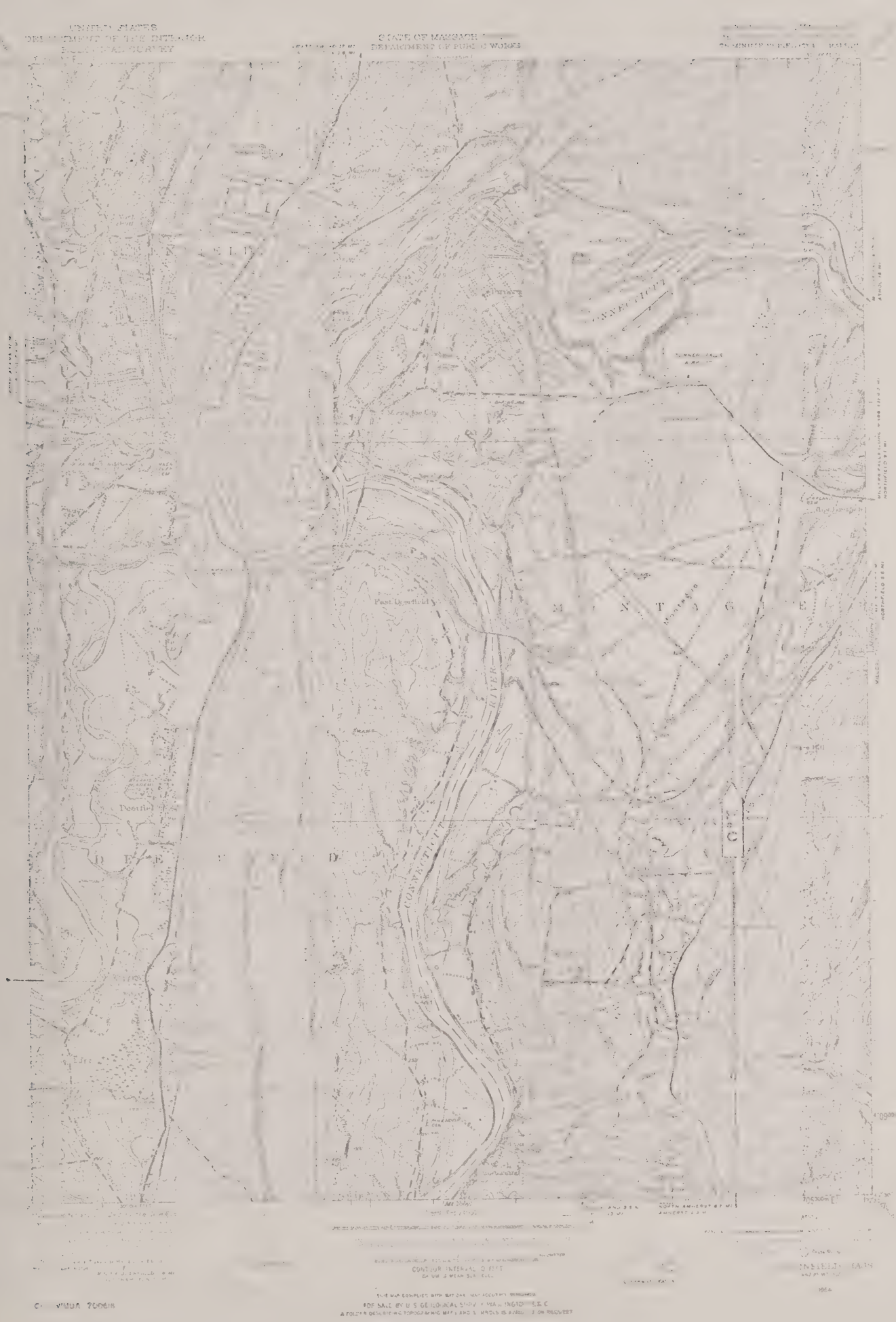
EXHIBIT C

TERRAIN STUDY MAPS
PROPOSED OPERATION OF WXMJA
CH. 216 (91.1 MC) 1.0 KW (H&V) 2[illegible] FT.
AMHERST, MASSACHUSETTS

KEAR and KENNEDY
[illegible]
WASHINGTON, D.C.


WHATELY
90°W


Deerfield
Montague
CONNECTICUT RIVER
CONNECTICUT RIVER
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Montague
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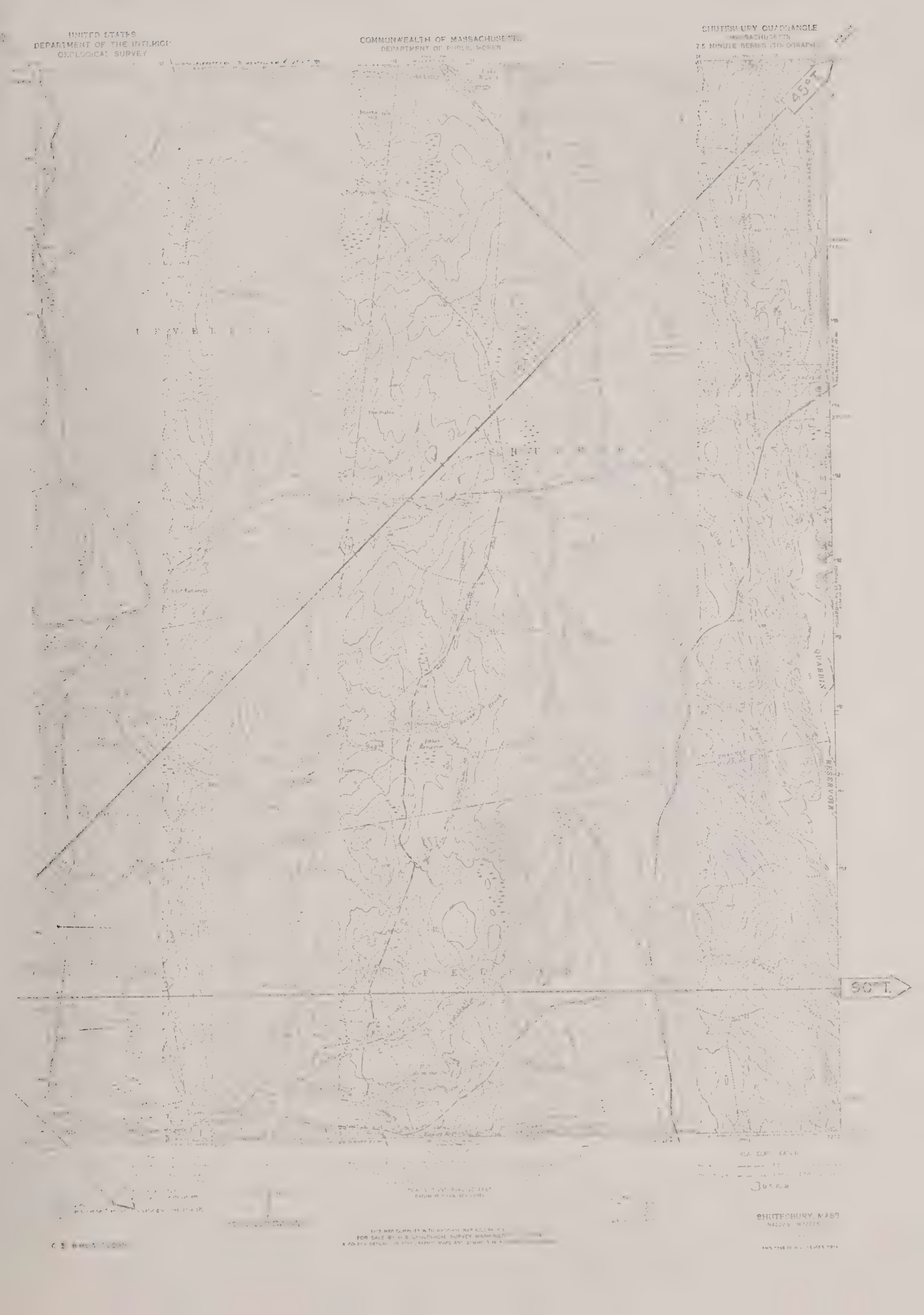
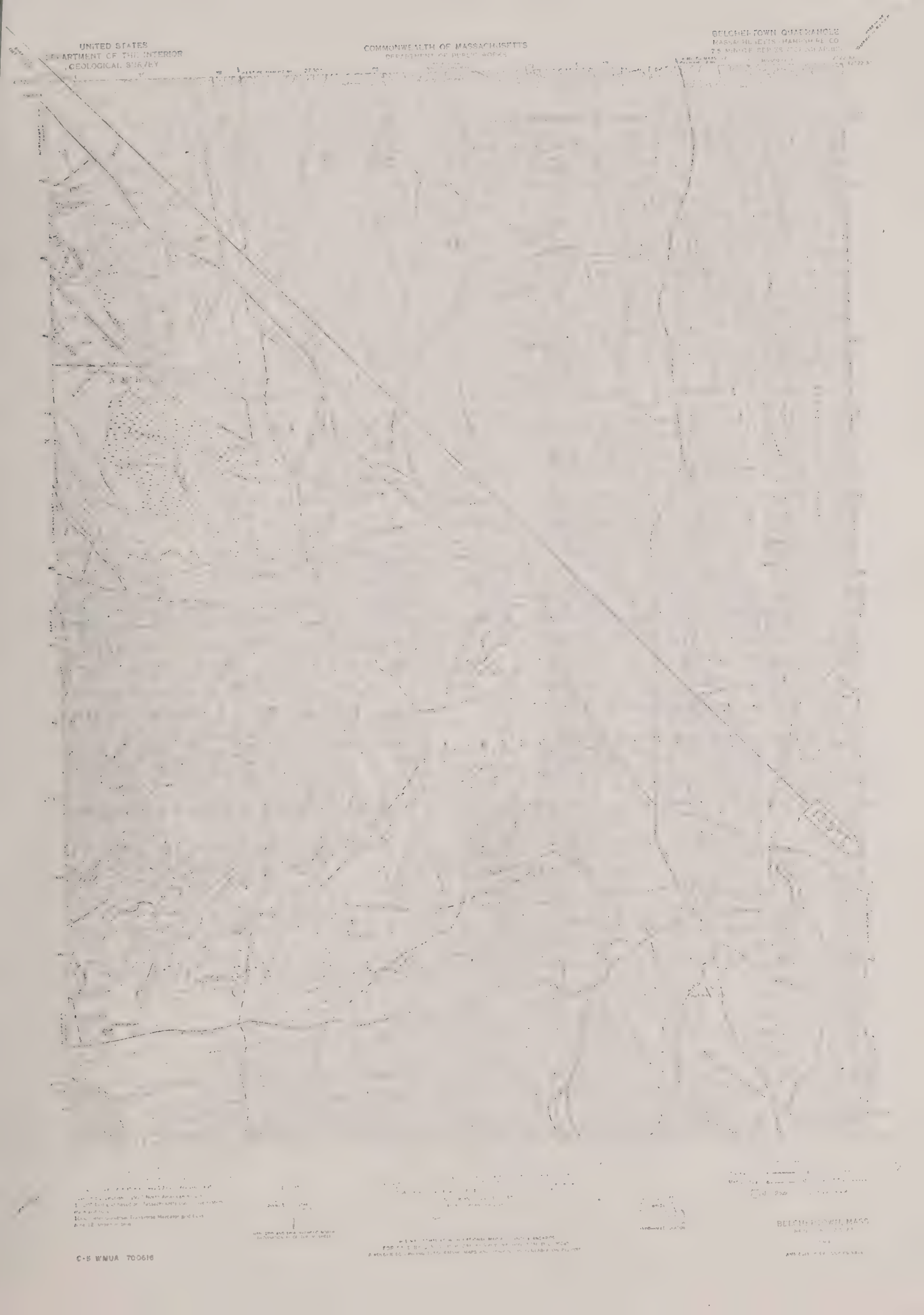
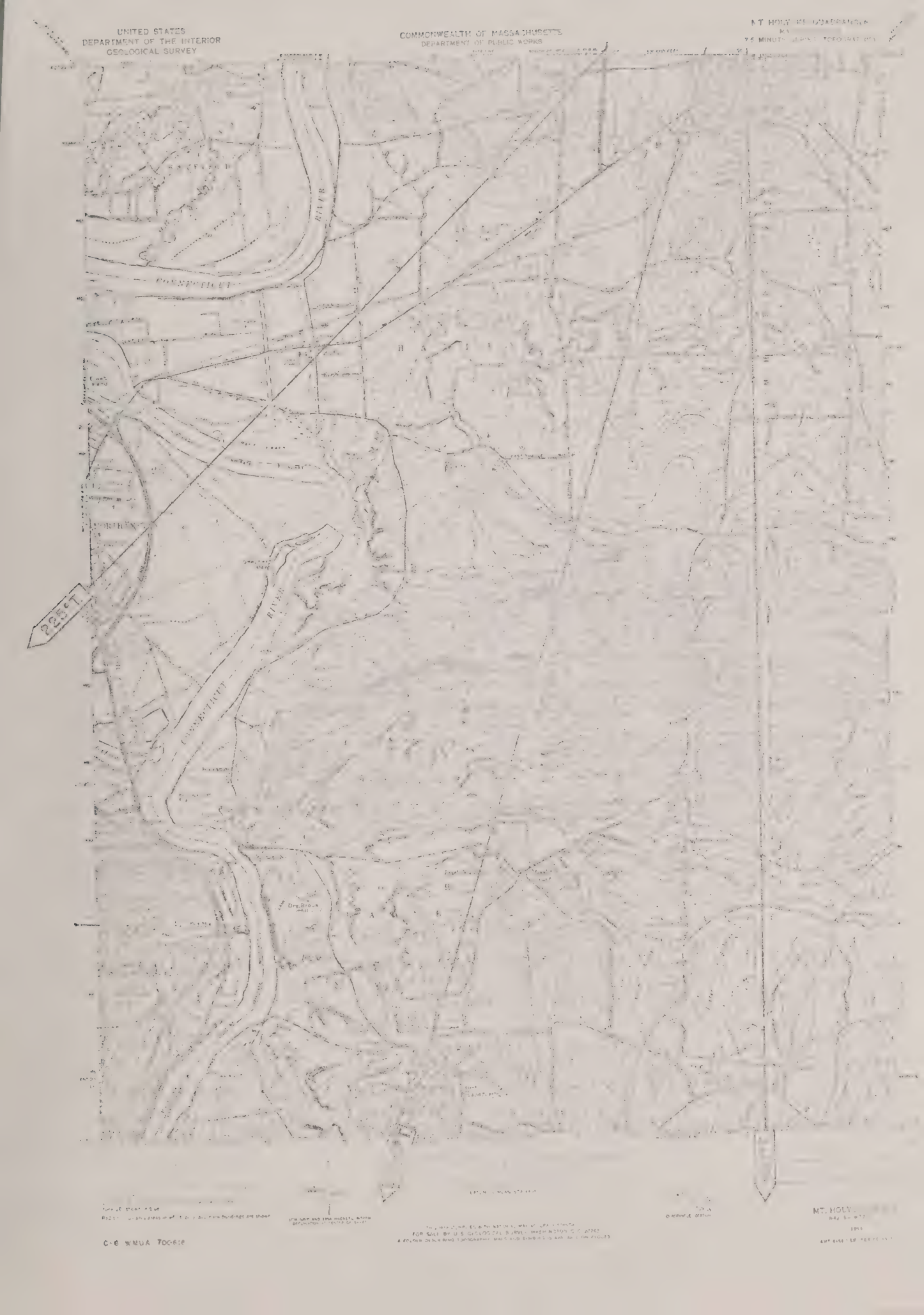
Montague
Deerfield
Montague


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
SHUTESBURY QUADRANGLE
MASSACHUSETTS
7.5 MINUTE SERIES (TOPOGRAPHIC)
45° T.
50° T.
QUABBIN
RESERVOIR
SHUTESBURY, MASS.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
QUABBIN RESERVOIR QUADRANGLE
MASSACHUSETTS
7.5 MINUTE SERIES (TOPOGRAPHIC)
QUABBIN RESERVOIR, MASS.
1957
WWNA 700616




UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
MT HOLLY MASSACHUSETTS
7.5 MINUTE SERIES (TOPOGRAPHIC)
CONNECTICUT
RIVER
CONNECTICUT
RIVER
225°T
Dry Brook
MT. HOLLY
1944
C-6 WMUA 700616

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
STATE OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD NORTH QUADRANGLE
MASSACHUSETTS
7.5 MINUTE SERIES (TOPOGRAPHIC)
WESTOVER
AIR FORCE BASE
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
SPRINGFIELD NORTH, MASS.

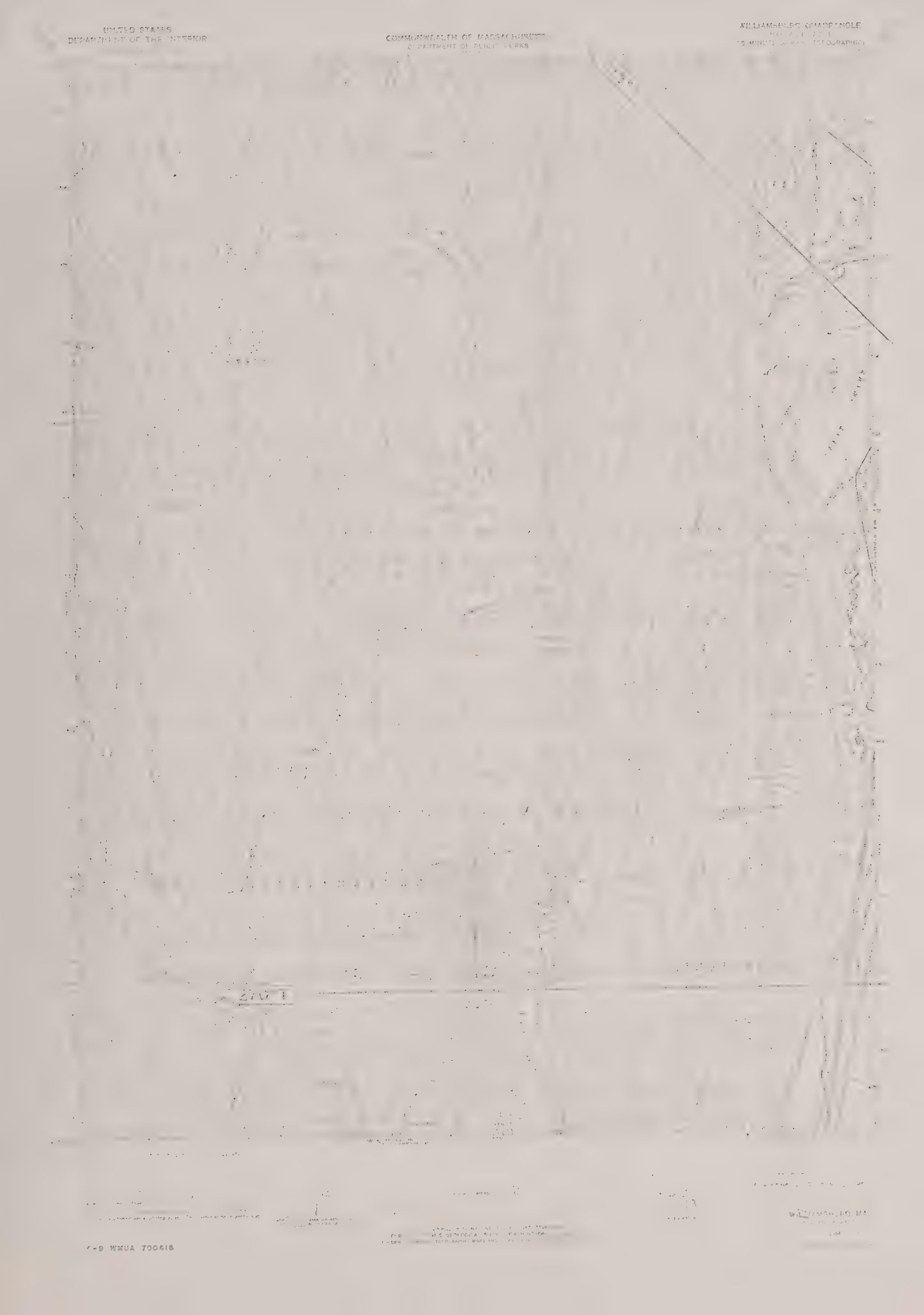


EXHIBIT D

TERRAIN PROFILES
PROPOSED OPERATION OF WMUA
CH. 216 (91.1 MC) 1.0 KW (H&V) 27 FT.
AMHERST, MASSACHUSETTS

KEAR and KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D.C.

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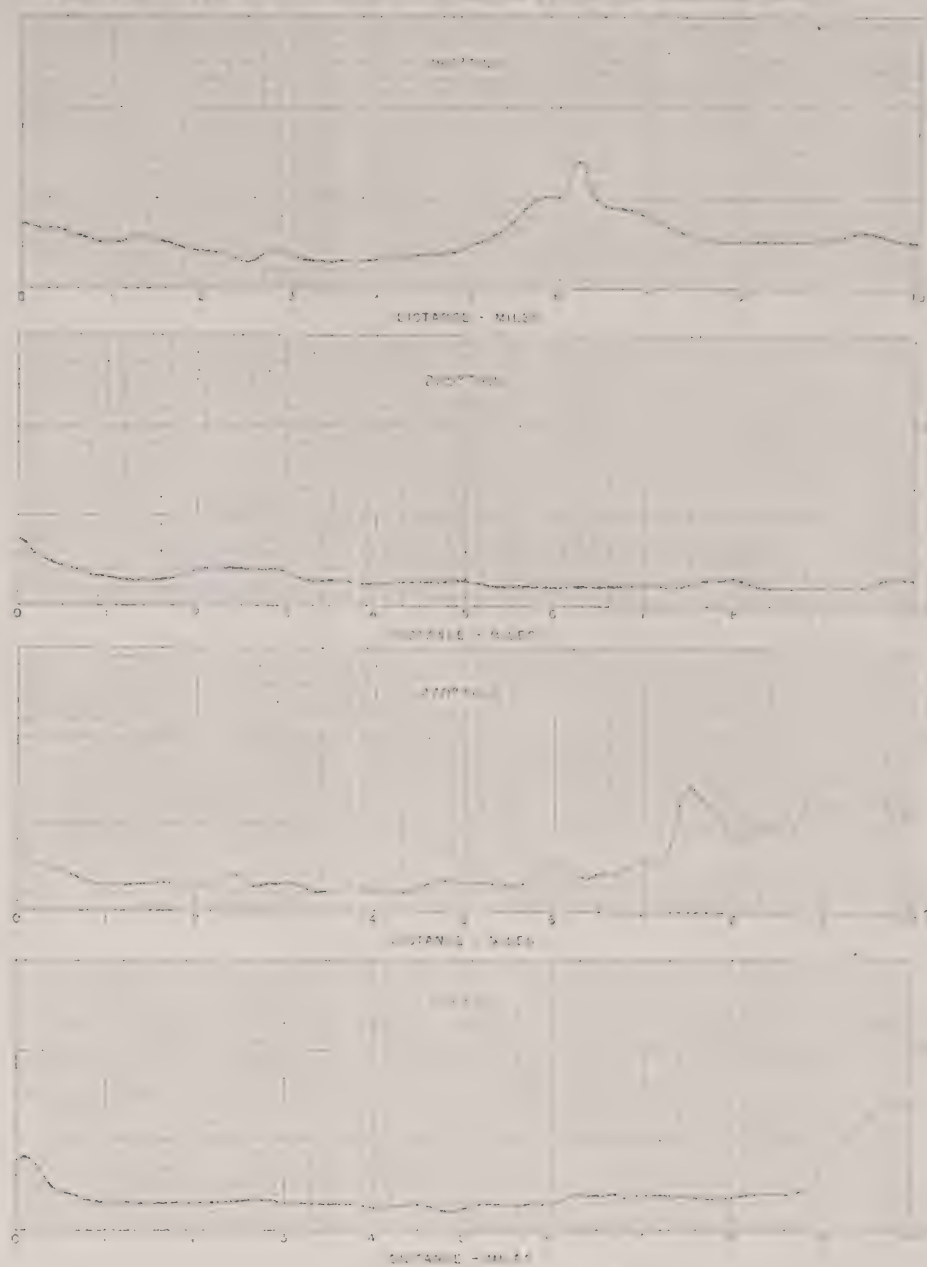

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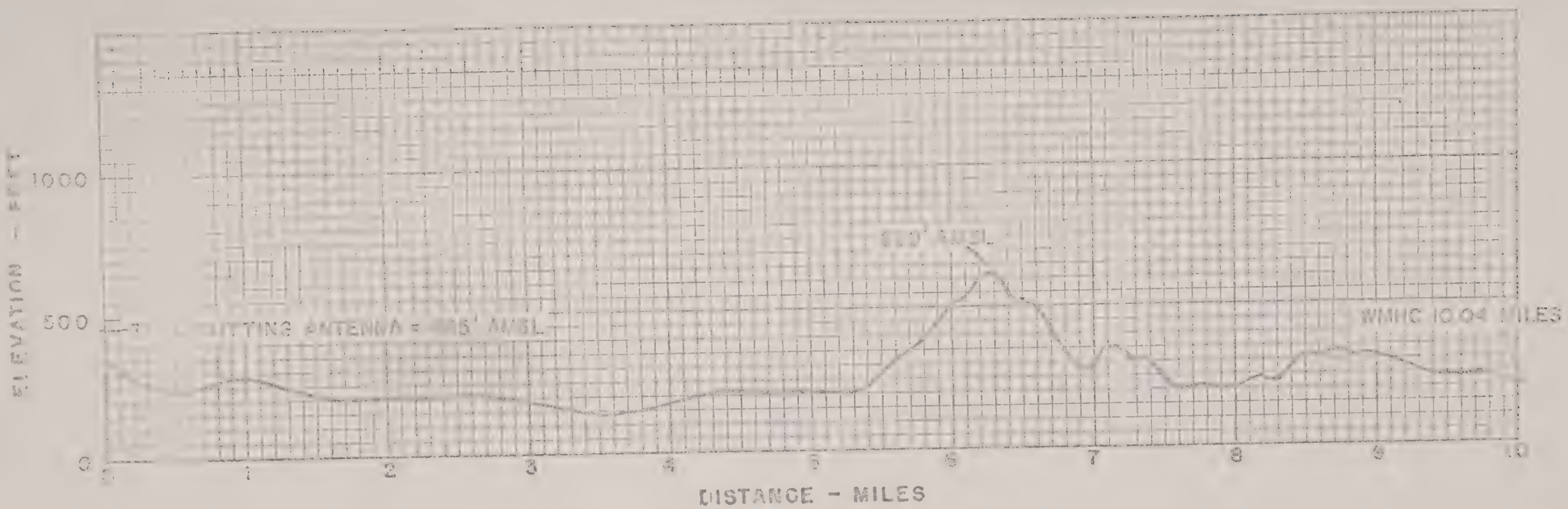


Source – U. S. GEOLOGICAL SURVEY TOPOGRAPHIC MAPS

KEAR & KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D. C.

Exhi

REC

OFFICE O

ELEVATION AND CONTOUR DATA
PROPOSED WMUA
91.1 MC 1.0 KW 27 FEET
AMHERST, MASSACHUSETTS

Azimuth Degrees True	Average Elevation 2 to 10 Miles (Feet AMSL)	Effective Antenna Height (Feet)	Distance t... In Mil... 70 dbu
0	420	45	3.7
45	873	-408	3.7
90	802	-337	3.0*
135	448	17	3.7
180	286	179	4.9
196.5**	262	203	5.2
225	135	330	6.8
270	317	148	4.5
315	222	243	5.8

*Terrain limited
**Not included in average (see engineering statement)

Height of Radiation Center Above Mean Sea Level
Height of Average Terrain Above Mean Sea Level
Height of Radiation Center Above Average Terrain
Effective Radiated Power (Horizontal and Vertical)

Geographic Coordinates

Latitude: 42° 23'

January 4, 1972

Mr. Ray Paul, Attorney
815 15th Street, N.W.
Washington, D. C. 20005

Dear Mr. Paul:

It is so long since you graciously offered to represent Mount Holyoke College with regard to a change of frquency for our Radio Station, that I thought I should bring you up to date as far as is possible.

To date Amherst has not submitted an application to us. If they do take any action, we shall so inform you.

Sincerely yours,

MOUNT HOLYOKE COLLEGE

Mary C. Thornton (Miss)
Purchasing Agent
mct/dm

cc: Mary Tuttle

2 Copies Prep. with

Mr Ray Paul, Attorney
815 15th St N W
Washington, D C 20005

Dear Mr Paul

It is so long since you
graciously agreed to present
Mount Holyoke College with
a copy of your
for our Rare Book Collection, that I
trust I should not
remembered has not submitted
an application to me.
Perhaps you have any objection, we should
be grateful if
Sincerely yours

Memo to Mrs Little —

Station WOMF at Ordway has asked Mount Royske to change radio frequency in series of moves to enable station to cover Arkansas Valley to increase potential power. They have offered to underwrite our expenses up to $ 350

The proposed change would give us a maximum potential power of 10 watts

Mount Royske ~~[illegible]~~ would like to know if there is anything we could do which would allow us to operate at 1 KW while complying with the request

It has been suggested that we employ a consultant other than the firm who has been retained by Ordway in Springfield It has been pointed out that someone who had a personal interest in Mount R would be desirable.

2 cc Mrs Tuttle

Mr Ray R. Paul Attorney
5150 15th St NW
Washington, DC 20005

Dear Mr Paul,

Thank you for your interest in Mount Holyoke College and for your very kind offer to look into the matter of a change of frequency for our Radio Station, WMHC.

This will be authorization for you to represent MHC in this change of frequency which has been requested by Amherst College.

Sincerely yours

Memorandum from Merrill Ewing

Business Manager

St. questa

Irany

What if MHC

wanted to increase

power to 50 KW?

Would the proposed

frequency still be OK?

— M E

So far as we know we can go

to 100— However we must

ask FCC whether we should

consider any power higher

Rec'd 8/15 1st-tle of NW

Book on Hardcastle contribution

Mr. Paul wrote

15

inquire for the area

[illegible]

authority from U.S. Dept. of Int. in the absence of [illegible] with [illegible]

Amherst College

94 new Tfr
365 used

2.16 : 42-2330
45-0100

It is requested that WDMT guarantee to cover all costs for technical expenses and consulting fees. It is also requested that a permit date [illegible] for reopening of the station ~~to not be~~ Sept 1, 1971.

The antenna shall be increased to provide for a frequency of 100 watts.

Mr Keenan 645-3[illegible]

Call Jim Cleve - 1205 Fr MT will be [illegible] Lawyer
Call her at home Fed Power Commission

WMHC

Cost sheet

Cost of the ad

Here

Cost for time of station / agreement testing

1
2.
3 deadline for response - 4pt
4

Charge

5 Find out if there is something else we can do with words other than / KW - while complying with the agreement

Would like Stat Board Schematic Report My 12301

Cost FCC -

Dorothy Berry

My State Broadcasting Council

Hewlett.

MARCH 19, 1973

WMHC FM
MOUNT HOLYOKE COLLEGE
SOUTH HADLEY, MASS. 01075

Re: FCC #19775

Frequency & deviation measurement: 23 Jan. 73

Frequency found: 90.7 Khz, + .4ppm, no adjustment required.

Deviation found ± 70 Khz. Set to ± 75 Khz & calibrate transmitter level meter to read "0" DB @ ± 75 Khz.

Equipment used for measurement:
Leader LBO 5860 SN 333, Cal. date Nov. 30, 1972.

Measurement made by:

Valley Radio Comm'n. Co.
Merle W. Jamieson, owner
License #PI-I-12547 Exp. 4-12-74

Merle W Jamieson

cc Mr. Art Chase
Engineering Dept. Mt. Holyoke

Mr. E —

3-23

Ruth Van Cleve was put in touch with a Wash. lawyer who specializes in Ed. Radio. His name is Ray Paul.

It is his feeling that there is a potential for complications for WHC. Ruth VanCleve suggests we (you or me) call Mr. Paul. That he would then get in touch with Mr. Perry and determine whether we should let him represent us — or should

SINCE OFFSET Printers LETTERPRESS 1898

THE F. A. BASSETTE COMPANY
53 HILLMAN STREET
SPRINGFIELD, MASS. 01103
TELEPHONE 736-1821

have our own man -

Mr. Paul's phone #

is 202-737-8154

inet

OCT 73

12 9999

TEST DATA SHEET

BFE-10C, M5594-A 10W TRANSMITTER

DATE 10-26-73

SERIAL 86277

FREQ. 90.7MHz

CUSTOMER Mt. Holyoke College
South Hadley, Mass.

TEST ENGR. [illegible]

METER READINGS:

R.F. OUTPUT 100 = 10 watts

P.A. PLATE CURRENT 58.5

PLATE VOLTAGE 320

POWER INPUT 6360 STAGE 17.86 WATTS.
(= [320 V. - (Ip x 250)] x Ip)

POWER OUTPUT 6360 STAGE AT J103 10 WATTS.
(Screen control clockwise)

PLATE DISSIPATION 6360 STAGE 7.86 WATTS.
($P_{in} - P_{out}$)

EFFICIENCY 6360 STAGE 56 %

RELEASED FOR SHIPMENT

[signature] DATE 10/29/73

FACTORY TEST DATA
M-6095 EXCITER UNIT

DATE: 10-26-72 Customer Mt Wilson Radio

EXCITER SERIAL NO.: 73-9507-008 South Haven, Mich.

FREQUENCY: 90.7 MHz TEST ENGR: James Rogers

Setting of C104, Freq. Adj. Control for correct Output Frequency is 3011

Value of C105, Osc. Feedback

Condenser is 150 mmf.

FREQ. CYCLES	DISTORTION % 100% MODULATION	FREQUENCY RESPONSE (with respect to standard 75 us pre-emphasis curve)
30	.32	-1.5 DB
50	.16	-.8 DB
100	.15	-.1 DB
400	.16	Ø DB
1000	.11	-.1 DB
2500	.08	Ø DB
5000	.12	+.2 DB
7500	.17	+.2 DB
10000	.21	+.5 DB
15000	.24	Ø DB

FM noise with respect to 100% modulation at 400 cycles -69 DB

Input level necessary to modulate 100% at 400 cycles is +11 DB

RMS audio voltage at TP120 when modulating 100% at 400 cycles is 18 RMS.

AM Noise -71.5 DB.

9 Nov 73
THRU
15 MAY 74

(1)

Frequency Change in MHC

Ed Long (Eng. Firm consultant) 585-9800
617-540-1496

Ed Long will mail info giving signal strength & conflict info for Westfield State + MHC both on 218 — also will show possibilities for WMHC in max power

Bruce Blanchard (WTCC) will write up Springfield Tech's proposal to MHC including ① xtal change + tune ② new FCC 3rd + rate involved ③ new 4-bay - circularly polarized antenna ④ reprinting costs —

? Ed Long also represents Westfield State to some degree — conflicting interests?

? E. P. claims we are within protected area of WMHC

? S.T.C.C. appears to want power only for sake of equipment — not serving the public — does Mount Holyoke wish to train students in radio or have a unique service to the community i.e. large radio station - women in college —?

→ maybe not — their students are all commuters - they need power to reach them —

WNED
WFCD
WSKB
Symbol for

(2)

(716)-511-ext. 396

Phil Hegardus - Westfield State
Nelson 9-N-73

presently w/ new current ? - have FCC acceptance

91.5 on 218 for 10 w - not on air until January

or thereabouts - not aware of Perry's proposed

to put a WHC on 218 @ 120 w sto or so -

Perry may be receiving a fee from Westfield

State - ? Study working w/ W. State on equip.

AL Jacques - Tom Hardy

9-1-518-355-4012

Westfield State

WFCR	203	34Kw	720'
WMCA	716	1Kw	100'
WAIC	220	220w	100'
WICC	315	10w → 250w	100'
WSCB	710	10w → 50w	100'
WMHC	714	10w	100'
WARH	Lic 208	construction 707 10w → 1kw, 5kw	720'
WAMC	717	10Kw	2000'
256 563-3311 Westfield Stat	715	10w	100'
783-6131 -4187 Western Mass College	714	application pending 10w	100'

WFCR will:

#1 - Install engineering equipment for freq. change.

#2 - new xtal & retune

#3 - new antenna - on 715

#4 cost of any reprinting necessary

BRUCE BLANCHARD
736-2781
WTC@

(4)

13NOV73

telecon w/ Mr Hackman 202-632-6976
Broadcast Facilities Division
F.C.C. Broadcast Bureau
(FM new stations

normally will ~~not~~ not allow ~~a~~ 10w station to operate closer than 10 miles co-channel, 5-6 " ist adjacent channel protected area for educated stations is normally out to the 1 mi/meter contour (exception are the top three educational channels + the low three commercial channels 215-220 & 221-223 — there the minimum channel spacing for station class applies)

to prevent another station from interfering with ours must send a "petition to deny" to the F.C.C. in the form of a letter + an accompanying engineering study

Change of coordinates (correction) can be made by a letter giving ~~the~~ appropriate info - perhaps accompanied by a map —

address - F.C.C.
1919 M st
Wash, D.C. 20554

what are the rules regarding (co-channel
1st adjacent channel
2nd " "
3rd " "

for F.M. educational stations ?

	minimal	desired
co	40	as above
1st	57	"
2nd	80	"
3rd	100	"

13 NOV 73 telecon w/ [redacted] McGill
of Student Activity - Newton MC College

753-6131 ext. 203 radio station 733-4133, 4

have application pending (been in about 2 mos.) on channel 214 — not aware of Longe proposal on that
WHYN is on 214 —
[redacted]
Ed Apatnik (student) has technical dept for station —
have dealt with Ed Long —
Apatnik works part time w/ WHYN-TV 785-1911

13 NOV 73 telecon w/ Ed Apatnik
works with Bruce Blanchard at WHYN-TV

Hackman - Leeve - F.C.C.

Leeve gave impression that appl. would be granted as soon as change was in.

hearing (#2K fee for TCC increase)
(Westfield Sta requested + received 10KW)

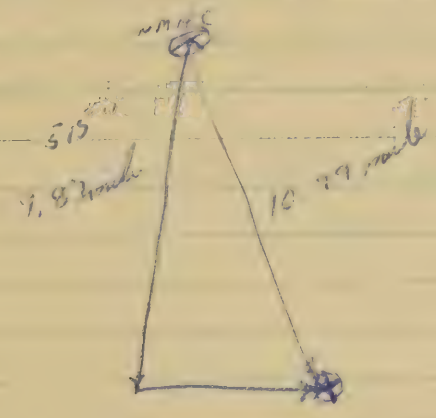
) 13 NOV 73 calculated distance from WMHC transmitter and Division New England Colleges proposed antenna is

~~[redacted]~~ 11.0 miles

WMHC	N 42° 14' 69.5"	WMHC	W 72° 33' 96"
W.N.E.C.	N 42° 6' 34"	W.N.E.C.	W 72° 28' 57"
	8' 35.5"		5' 39"

(W) 339"

Δ 5' 15.5"



339"

4.83 miles

13 NOV 73 Telecon w/ Bruce Plamondon WTCC

~~[redacted]~~

~~[redacted]~~

~~[redacted]~~

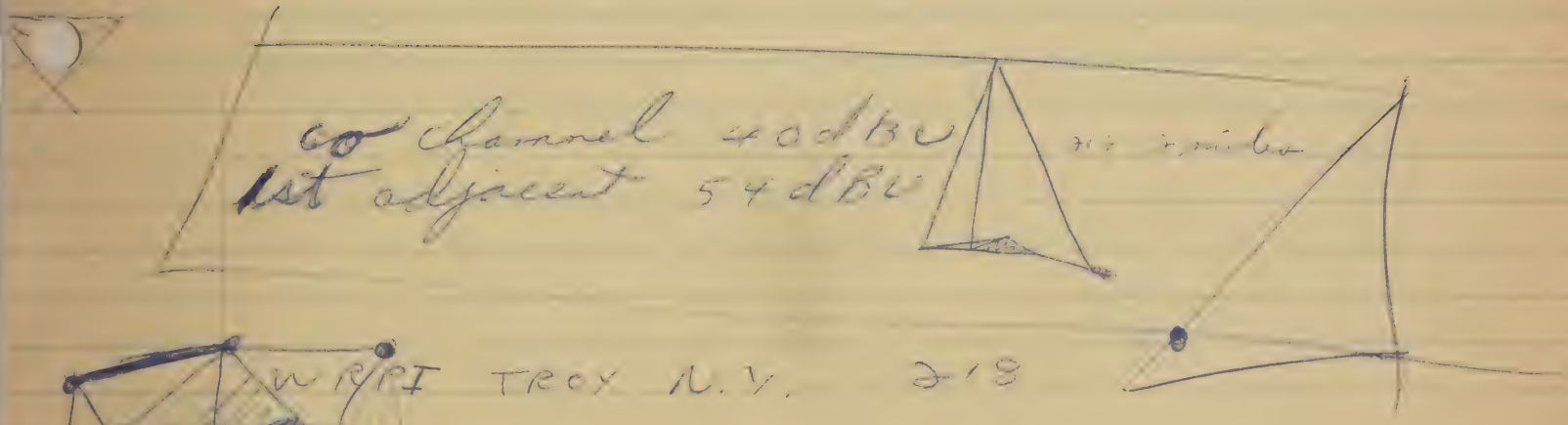
W.T.C.C.	W 72° 33' 105"	N	42° 6' 37"
WNEC	W 72° 28' 57"	N	42° 6' 34"
	5' 48"		- 2"

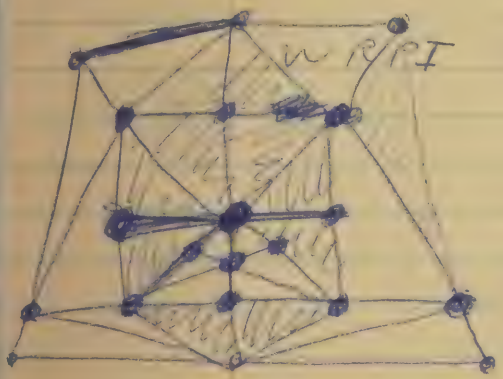
questions

if we go to 215 what would be the possible difficulties with a commercial station on 221

3 Nov 73 telecon w/ Ed Parry

WMUA radial towards WMHC as 200' above avg. terrain 1KW





difference in Latitude 7 1 sec = .0 1971

" " Long 7 1 sec = cos ° x .01977

protected area for F.M. educational stations

	minimum desired	voltage ratio
co-channel	40 dBu – 60 dBu	1 – 10
	54 " 60 "	1 – 2
	80 " 60 "	10 – 1
	100 " 60 "	10 – 1

F.C.C will normally not allow co-channel FM station closer than 10 miles

~~co~~-channel " " " adjacent " " 5-6 miles

Telecon w/ WAMC 14 Dec 73 518-477-7571
Mr Walker Station Manager
~~Mr Burger~~
Mr Burger - Chief Engineer coordinates N 42° 39° 1.''
W 73 10 04"

bearing 135° dist light 1899' – cobble contour (probable) - 50 ft.

WAIC 91.9 ch 220 @ 23 kw 46' AAT

Ed Byrne FAC Advisor
Bruce Stebbins - PD Lowell Putnam -

27 nov 73

Telecon w/ Larry Warren (Amherst senior - studying for past 2 yrs)

-7-542-7783

"change proposed 2 3 yrs ago was prepared by the Amherst consultant at that time - Mr. Ed Perry"

"Mr. Perry + WAMH did not part on the best of terms"

"be careful - have pulled some dirty deals"

"proposed change was not stopped by WCC but rather by Amherst themselves - they have their C.P. and have had it for ~ 2 yrs. Still haggling w/ WFCR (Univ) about antennas on Mt. Tuscola - Amherst owns WFCR site - U Mass owns remaining land -

if we change to 2'S, WTCC changes to 4/4 @ 350 w, and WTCC does not get CPB funds - will we get the change into + antenna? → should it we get a guarantee of that point -

Jerry Reisfeld

N. Lat 42° 15' 9"
W. Long 72° 34' 33"

13 MAY 74

Telecon w/ Bruce Blanchard WTCC 13 MAY 74

"waiting for the grant (WTCC's) to be approved." "anticipate having change effected by December 1974"

Expect to hear within a month & will let us know —

13 MAY 74 Telecon w/ Earl Jones Faculty Student Activity WMTC Colby
Survey promised survey by 5-6 wk — authorized WMTC contact ye

7 Jun Lodged objection to WTCC proposed power & freq. change since they had filed request in months prior to WTCC

WMTC will fight in court if necessary if WTCC gets 71?

13 MAY 1974 562-6541

(11)

15 MAY 74 telecon w/ ED PERRY ED F. IN 1550 C.

WTCC FILED W/FCC & HEW in DEC.

WMHC W/FCC

MR. EWING'S OFFICE

accepted for filing in January

delaying until WNEC change freq.

meeting WNEC & WTCC MONDAY 20 MAY 74

channel (206) Ted Bean, Bruce Blanford, Ed Perry

WNEC change maybe ~~[redacted]~~

(2) HEW grant (95% of requested)

possible for WMHC on or in Dyton 318

→ possible call in 2 or 3 weeks ←

file # BPED 1755

Springfield
Technical Community College

ARMORY SQUARE, SPRINGFIELD, MASSACHUSETTS 01105 • TELEPHONE: (413) 781-6470

DEAN OF
ACADEMIC AFFAIRS

November 12, 1973

Mr. Art Chece
3 Carr Lab
Mount Holyoke College
South Hadley, Massachusetts

Dear Mr. Chece:

To confirm Bruce Blanchard's conversation on November 9, 1973, the following will be Springfield Technical Community College's commitment to change the frequency of radio station WMHC from the present channel number 214 to channel number 218.

1. Two bay (circularly) polarized antenna tuned to channel 218. NEW FM-78A GATES (GATES, CCA, RCA, MARTI)

2. The retuning of your present transmitter including a new crystal for channel 218.

3. To complete all necessary engineering requirements for the FCC application to change frequency to channel 218.

The above agreement is contingent on (1) FCC approval of the changes in frequency for WTCC on channel 214 and WMHC on channel 218; and (2) acceptance of an HEW Grant for Educational Broadcast Facilities from which above costs will be paid.

Sincerely,

Richard G. Labrie

Richard G. Labrie
Administrative Assistant to the
Dean of Academic Affairs

RGL/cmo

Nov 13, 1973

A STUDY OF THE MERITS OF FM CHANNELS 214 AND 218 FOR USE BY WMHC AT SOUTH HADLEY, MASS.

1. This report has been prepared by Educational FM Associates for the purpose of providing officials at Mount Holyoke College, licensee of Radio Station WMHC, with data pertaining to the power and coverage available to WMHC for an operating frequency of FM Channel 214 and Channel 218.

2. Educational FM Associates has been retained to prepare this study by Springfield Technical Community College, licensee of Radio Station WTCC in Springfield, Massachusetts. WTCC currently operates on FM Channel 215 with ten watts of power but has an accepted application pending with the FCC requesting a power increase to 250 watts. WTCC is proposing that WMHC, which now operates on FM Channel 214 with ten watts of power, change frequency to FM Channel 218. Such a change would permit WTCC to then apply to change frequency from FM Channel 215 to Channel 214 and to request a power increase to approximately 5,000 watts. WTCC seeks this power increase to meet the qualifications standards for applying to the government for grants to help finance construction and operation of the WTCC facilities.

3. We have examined the potential of Channels 214 and 218 for use by WMHC in two respects. The first of these is the maximum power at which WMHC

can operate on either channel at its present site. In this regard we feel that both channels offer absolutely the same potential. We find that the operation of WMHC will be limited to approximately ten watts on both channels by WMUA in Amherst, Massachusetts which operates on FM Channel 216 with one thousand watts of power and an antenna height above average terrain of approximately 200 feet at a bearing toward WMHC. As shown on Map 1, included as part of this report, the WMUA 60 dbμ service contour now reaches to the WMHC site. In theory, WMHC is already causing some interference to the WMUA signal in the immediate vicinity of Mount Holyoke College and possibly if this interference had been brought to the attention of the FCC when WMUA's power increase application was filed their power increase might not have been granted. It is clear, however, that an application by WMHC to further increase anarea of interference to WMUA by increasing power would probably not be granted by the FCC, especially if WMUA were to protest which we feel is likely. Regarding the limitation by the present operation of WMUA, both FM Channel 214 and Channel 218 are affected equally since both lie two channels from WMUA's Channel 216 operating frequency. Since WMHC is limited to ten watts on both channels by WMUA, we have not explored the relative merits of either channel with regard to other allocations. We do note, however, that the present WMHC site lies well within the protected 60 dbμ contour of WAMC in Albany, New York which operates on FM Channel 212 with ten thousand watts of power from a transmitter site on Mount Greylock in Adams, Massachusetts.

At present, the operation of WMHC on Channel 214 is producing a certain amount of objectionable interference within the WAMC service contour. We therefore feel that regardless of the limitation imposed by WMUA, there is no possibility of WMHC operating with higher power on Channel 214 since a power increase on this channel would further increase interference to WAMC. The limitation by WAMC is of no significance at the present time. However, should WMUA change its transmitter site in the future, WMHC would continue to be limited to ten watts on Channel 214 by WAMC but might possibly be allowed to increase power on Channel 218.

4. The other aspect which we considered with regard to the two channels was the relative coverage without interference which WMHC might expect to enjoy operating with a power of approximately ten watts. The present WMHC 60 dbμ service contour is shown on Map 1 as a circle of two miles radius surrounding the WMHC transmitter site. This is the statuatory coverage to which the FCC entitles a ten watt station and WMHC will receive protection to its 60 dbμ contour on both Channel 214 and Channel 218. There is, however, some slight difference in the amount of service WMHC can render outside of its 60 dbμ contour and this amount of extra service is totally dependent on the operating frequency of the station as it relates to other allocations. In this regard we believe that WMHC will obtain better coverage on FM Channel 218. At the present time two applications are pending which will limit the coverage possible by WMHC on Channel 214. The pending proposal

by WTCC requests a power increase to 250 watts on Channel 215. On a first adjacent channel, the FCC considers a 54 dbμ signal contour necessary to produce interference to a protected service contour. As shown on Map 1, only about two miles separates the proposed WTCC 54 dbμ interference contour and the WMHC 60 dbμ service contour. Another pending application by Western New England College requests permission to construct a new ten watt FM station in Springfield to operate on Channel 214 which is WMHC's present frequency assignment. For stations operating on the same channel, the FCC considers a 40 dbμ signal sufficient to cause interference to a station's protected 60 db service contour. As shown on Map 1, about two and one half miles separates the WMHC 60 dbμ service contour and the 40 dbμ interference contour proposed by Western New England College. We should note here that the applications by WTCC and Western New England College are mutually exclusive and only one, not both, of the applications can be granted by the FCC. On Channel 218, the co-channel limitation is imposed on WMHC by a new ten watt station just granted to Westfield State College in Westfield, Massachusetts. As illustrated on Map 1, the Westfield station produces a 40 dbμ interference contour which lies about five miles away from the WMHC 60 dbμ service contour. WRPI in Troy, New York operates on Channel 218 also but presents only a theoretical, not a practical limitation since the entire Berkshire Mountain Range lies between WMHC and WRPI and WRPI is not audible in the South Hadley area. We do not consider WWUH and WHUS which operate on Channels 217 and 219 from transmitter sites in Hartford and Storrs, Connecticut as significant adjacent channel limiting factors.

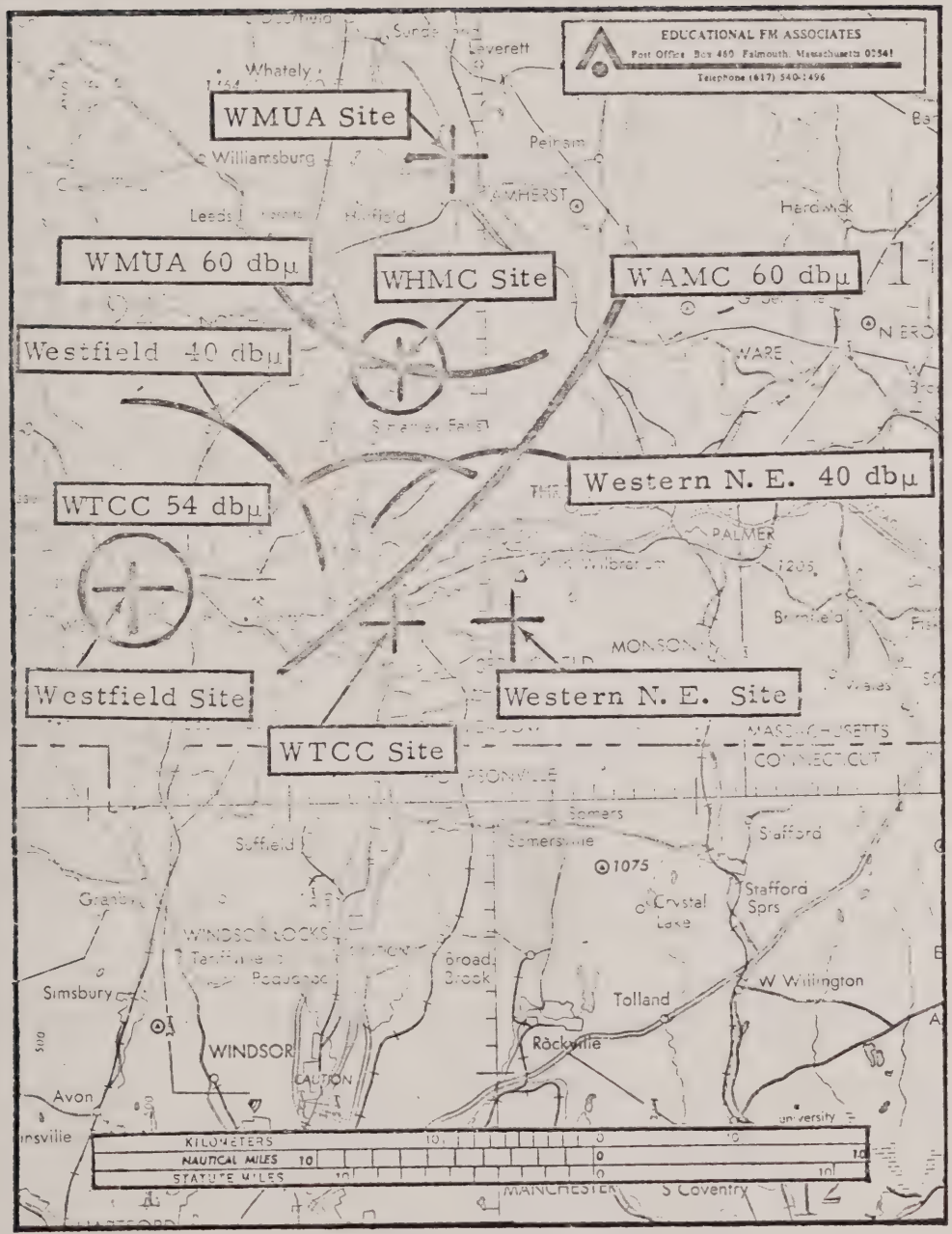
5. In view of the considerations detailed in previous paragraphs of this study, we feel that Channel 218 is slightly superior to Channel 214 for the operation of WMHC at its present transmitter site. We stress, however, that the potential coverage which WMHC can expect on either frequency is very nearly the same. The only advantage in operating on Channel 218 lies in gaining a small amount of extra service area to the Southwest of WMHC and in the possibility of a power increase should WMUA change transmitter site although we are aware of no plans for them to do so.

Respectfully submitted,
EDUCATIONAL FM ASSOCIATES

Edward F. Perry, Jr.

Edward F. Perry, Jr. - Owner

Dated: November 13, 1973



Map 1. Limitations on the Use of FM Channels 214 and 218 for WMHC Radio at South Hadley, Massachusetts

NOV 16, 1973

AMENDMENT 1

A STUDY OF THE MERITS OF FM CHANNELS 214 AND 218 FOR USE BY WMHC AT SOUTH HADLEY, MASS.

1. On November 13, 1973 Educational FM Associates prepared a report dealing with the relative merits of FM Channels 214 and 218 for use by Radio Station WMHC at South Hadley, Massachusetts. Based on the assumption that WMHC would remain at its present licensed location, we concluded that neither frequency offered any potential for operation at greater than ten watts power but that slightly better coverage without interference might be expected for a ten watt operation on Channel 218.

2. Since tendering the above referenced report to Mount Holyoke College, licensee of WMHC, we have been informed by Mr. Art Chase of the Mount Holyoke staff that the licensed coordinates for WMHC may be in error. Mr. Chase feels that the station is actually located at coordinates of 42° 15' 9.5" North Latitude and 72° 34' 36" West Longitude rather than 42° 16' 01" North Latitude and 73° 34' 07" West Longitude as specified in the station license and shown on official FCC listings. We have not yet verified Mr. Chase's conclusions regarding the location of WMHC but we believe Mr. Chase to be fully qualified to make a determination of this sort and would expect his calculations to be correct. Based on the premise that WMHC is actually located as shown by the new set of coordinates, we must revise some of the conclusions which we reached earlier.

3. Retermination of the WMHC site makes no difference with regard to the station's potential power on Channel 214 since the site continues to lie within the 60 dbμ contour of WAMC which operates on Channel 212 from a transmitter site on Mount Greylock, Massachusetts. For reasons detailed in the earlier report, no power increase on Channel 214 is possible so long as the WMHC antenna site remains inside the WAMC 60 dbμ contour.

4. We believe, however, that redetermination of the WMHC site will permit a power increase on Channel 218. As discussed in the earlier report, the location of WMUA in Amherst limited the power possible by WMHC to ten watts on Channel 218. The redetermination of the WMHC site places WMHC at 10.1 miles from WMUA or about 1.1 miles farther than before. This extra spacing will permit WMHC to operate with a power of about 80 watts without causing any interference to WMUA. Another limitation to WMHC on Channel 218 is a new station just granted to Westfield State College in Westfield, Massachusetts. At the redetermined site, WMHC will be limited by Westfield to a power of about 80 watts.

5. We think that a power increase is now possible for WMHC providing the allocation study is based on the redetermined site as shown on an amended copy of Map 1, attached to this report. Of course, WMHC would need to request a frequency change from Channel 214 to Channel 218 and would be limited to a maximum effective radiated power of about 80 watts. There are

several ways of implementing this power increase. We feel that the most practical would be a one hundred watt transmitter operated in conjunction with a two bay circularilly polarized antenna. A viable alternative would be to obtain a linear amplifier for the new Gates Ten Watt Transmitter WMHC has ordered and operate the amplifier into a one or two bay antenna.

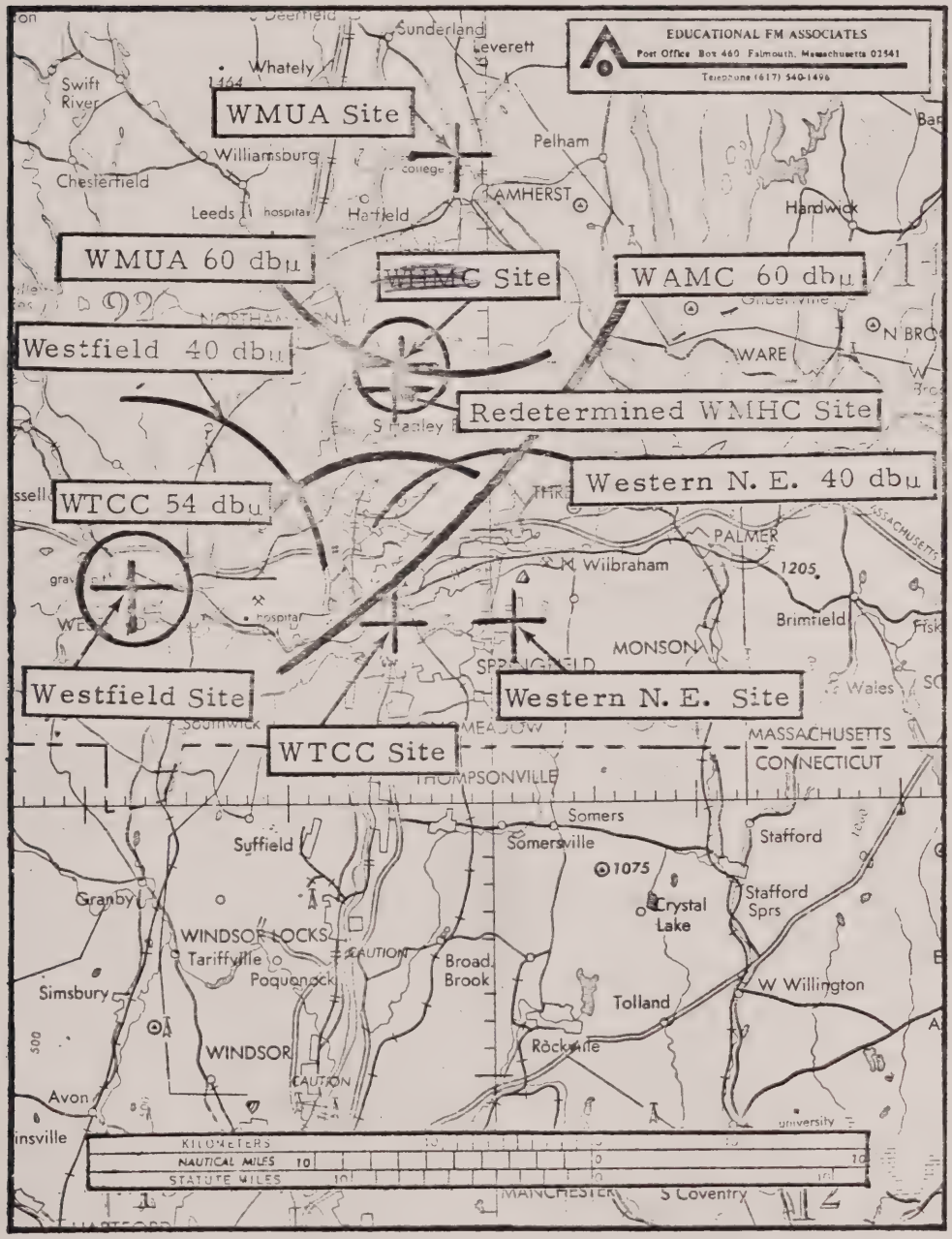
Respectfully submitted
EDUCATIONAL FM ASSOCIATES

Edward F. Perry, Jr. - Owner

Edward F. Perry, Jr.

Dated: November 16, 1973

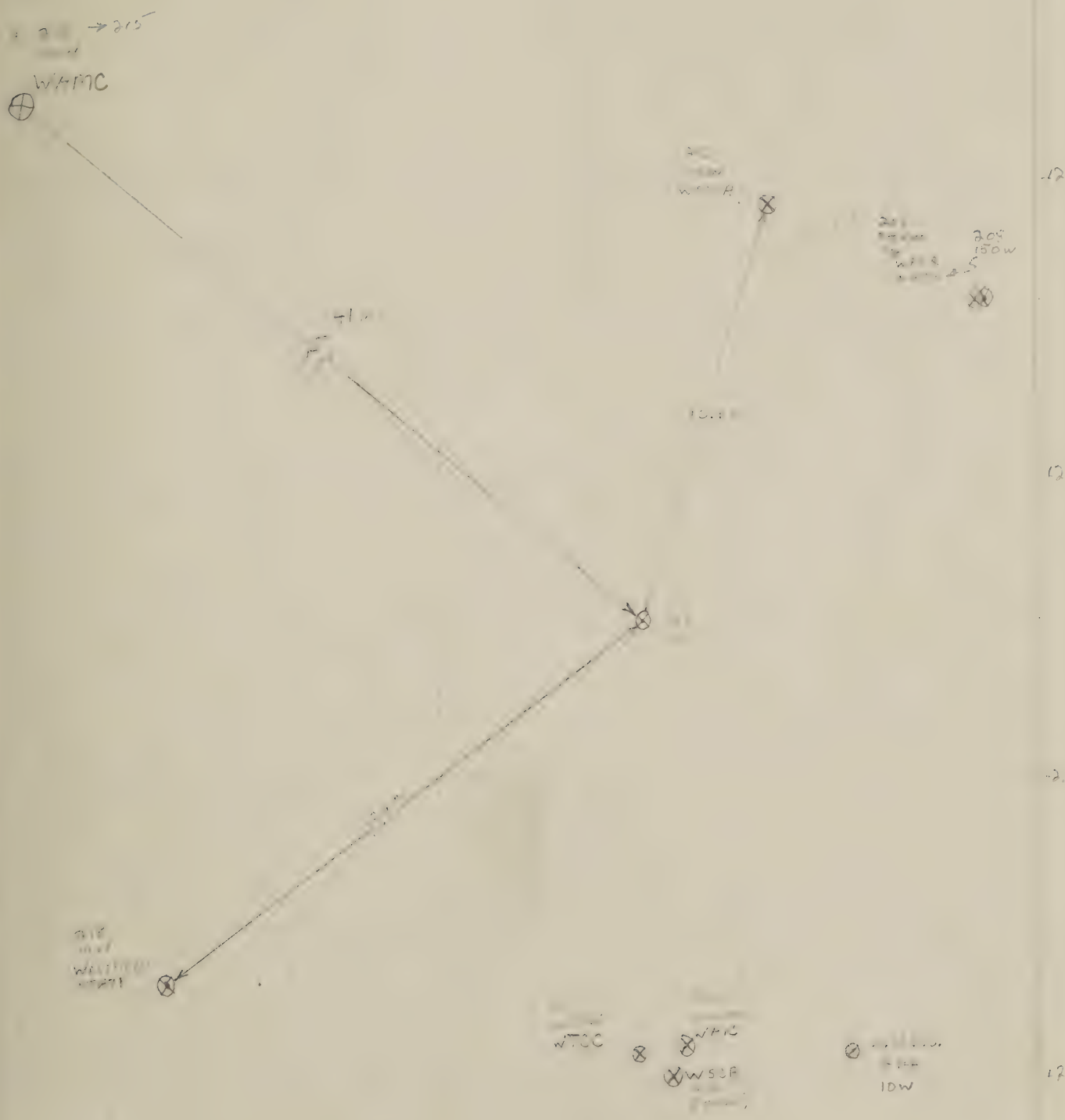
AMENDED TO SHOW DETERMINATION OF NEW COORDINATES FOR WMHC ANTENNA SITE LOCATION



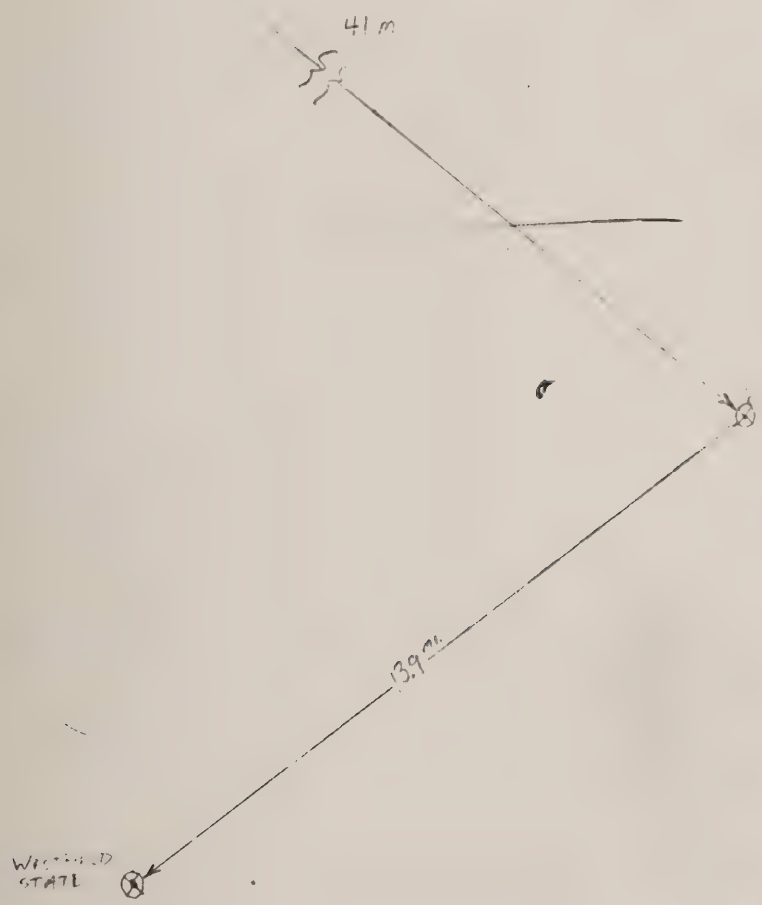
Map 1. Limitations on the Use of FM Channels 214 and 218 for WMHC Radio at South Hadley, Massachusetts

26 Nov 73

MAP OF FM EDUCATIONAL STATIONS WHICH LIMIT FREQUENCY & POWER ALLOCATIONS OF WMHC



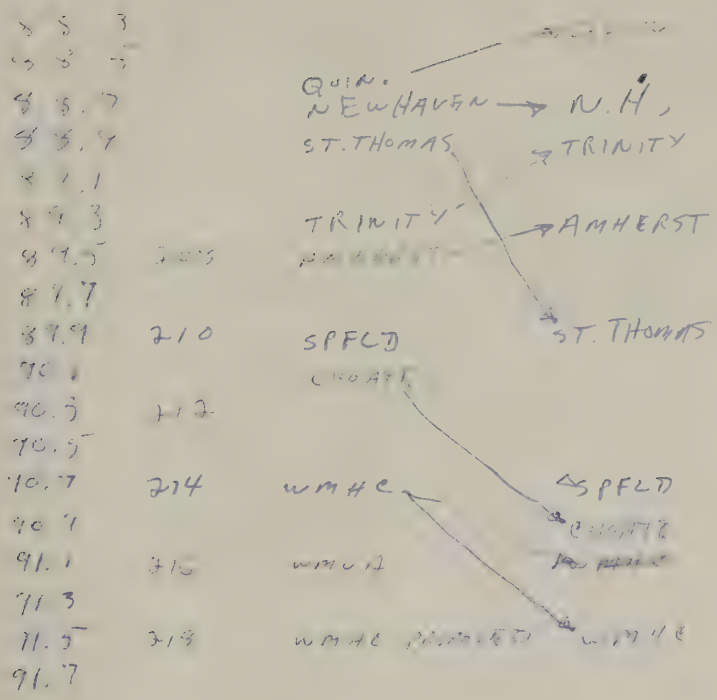
ABC NOV 1973


41 m
13.9 NM
WTCC

1599' - 150 miles
N Bearing 135°

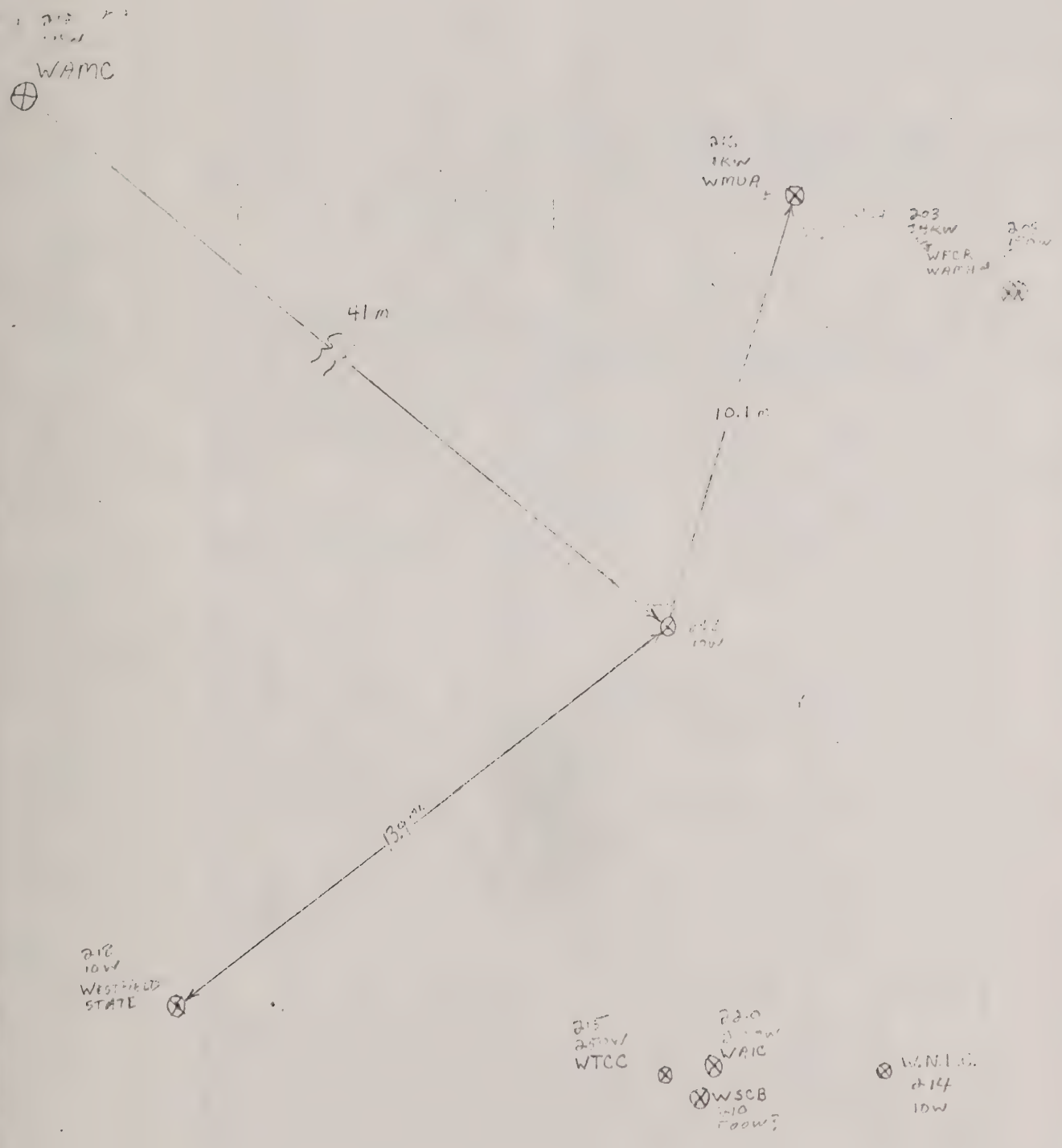
			10W	100'	
	210			100'	N 42° 06' 00 W 73° 33' 45"
	212				N 42° 38' 11" W 73° 10' 04"
	217				N 43° 05' 45" W
					N 43° 2'
					N 43° 23' 3'

1899' + 50 miles on bearing 135°

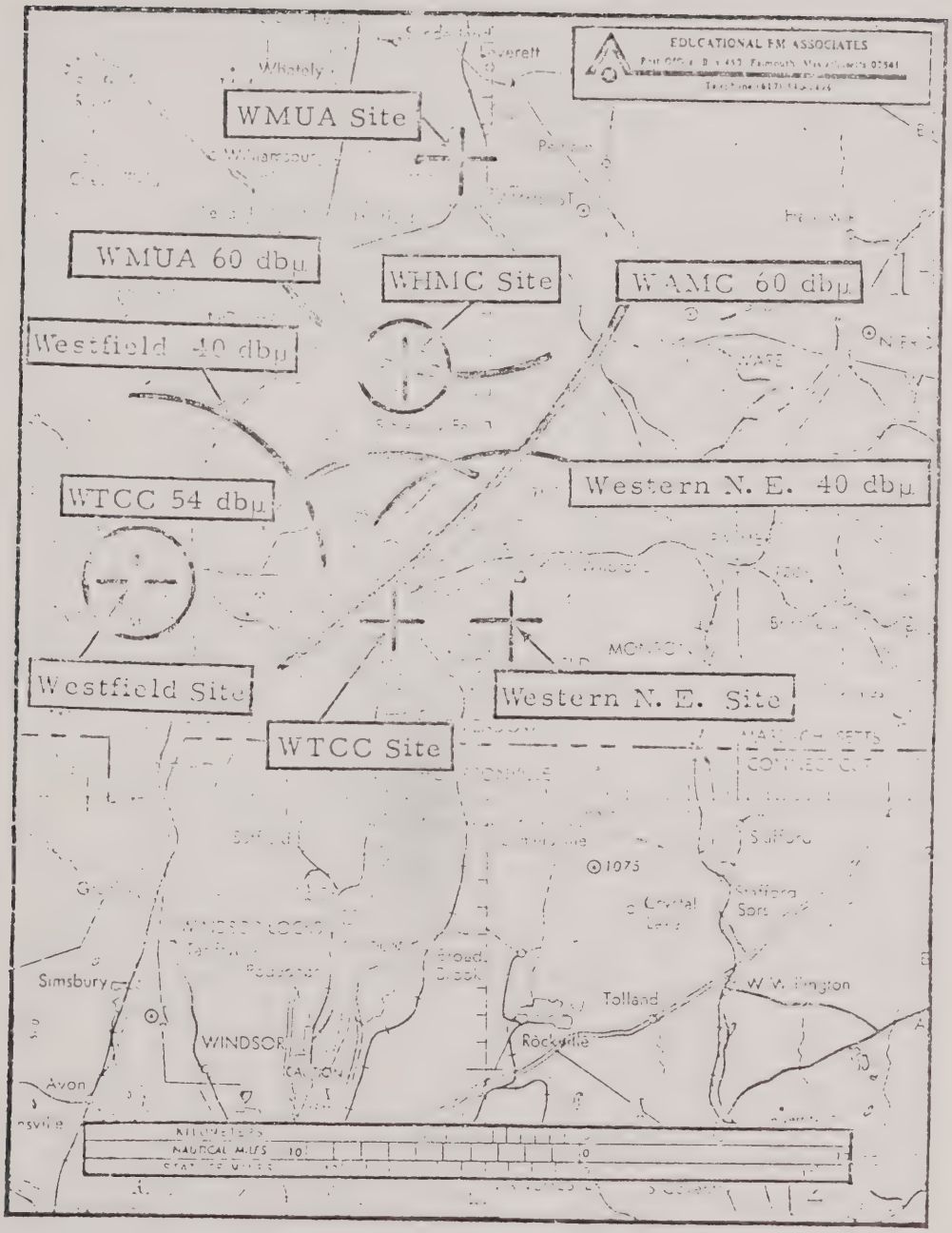


protected only to the 1 MV/meter contour
50 MV contour is inapplicable

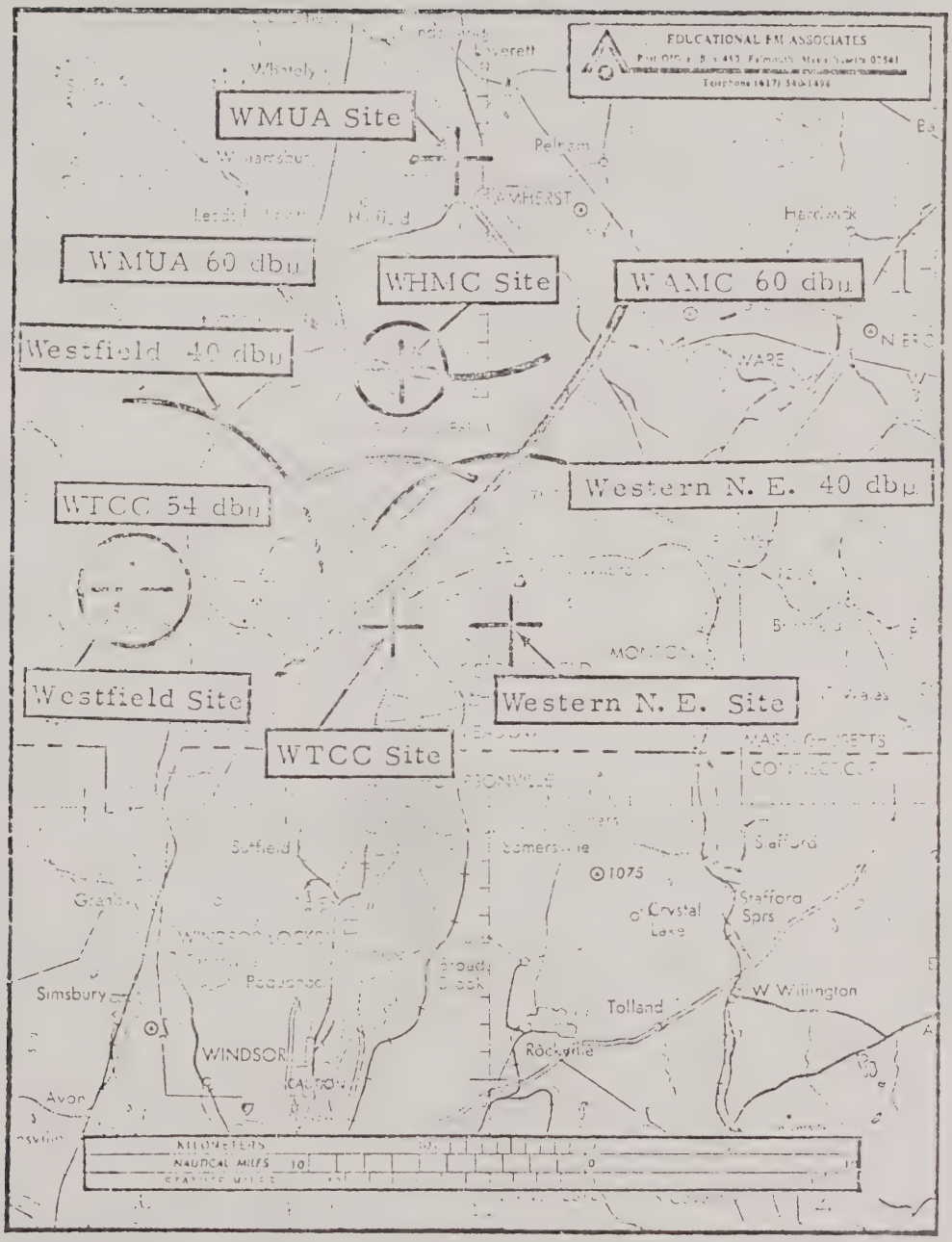
MAP OF FM EDUCATIONAL STATIONS WHICH LIMIT FREQUENCY + POWER ALLOCATIONS OF WAMC



ARC



Map 1. Limitations on the Use of FM Channels 214 and 218 for WMHC Radio at South Hadley, Massachusetts



Map 1. Limitations on the Use of FM Channels 214 and 218 for WMHC Radio at South Hadley, Massachusetts

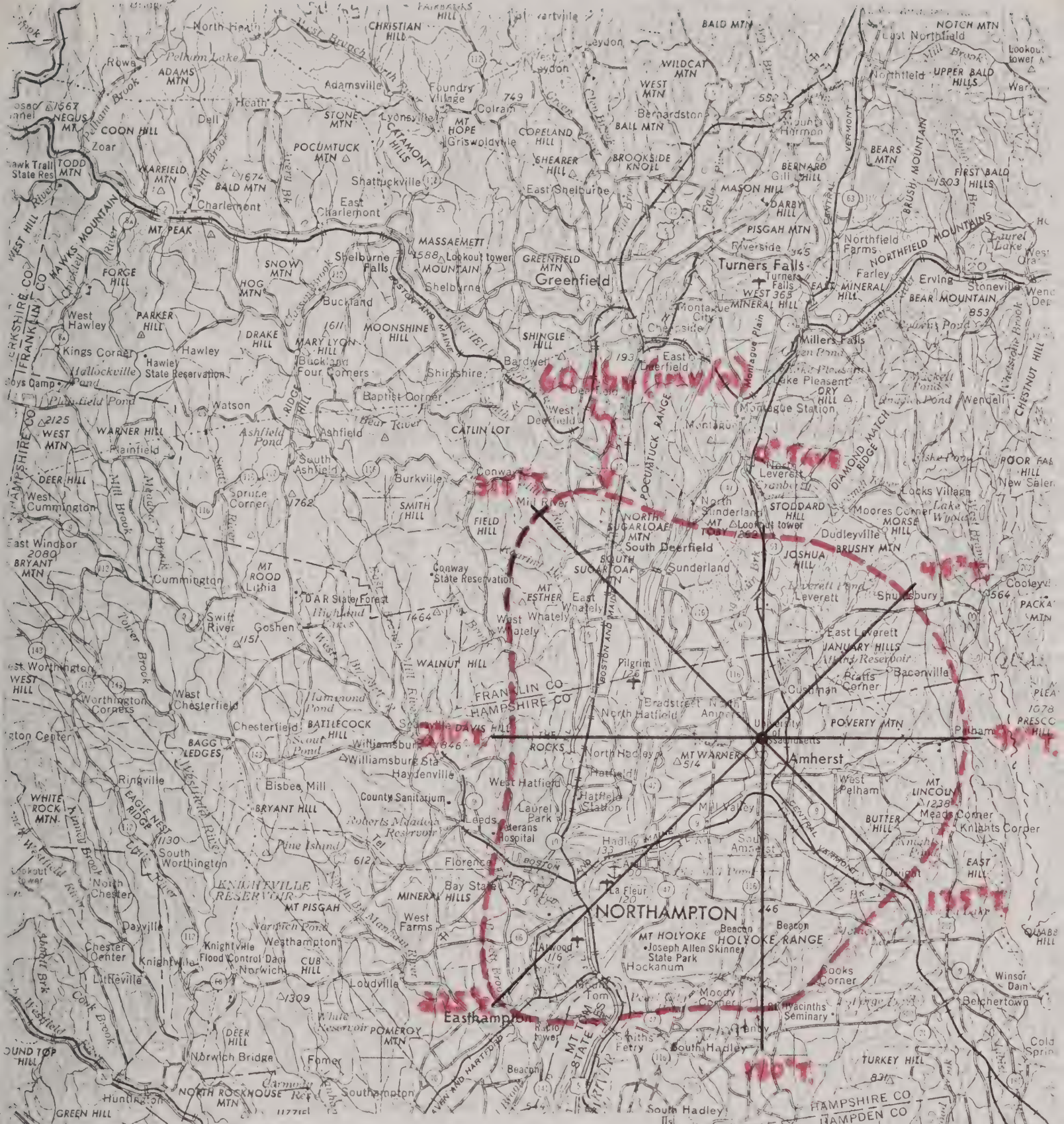
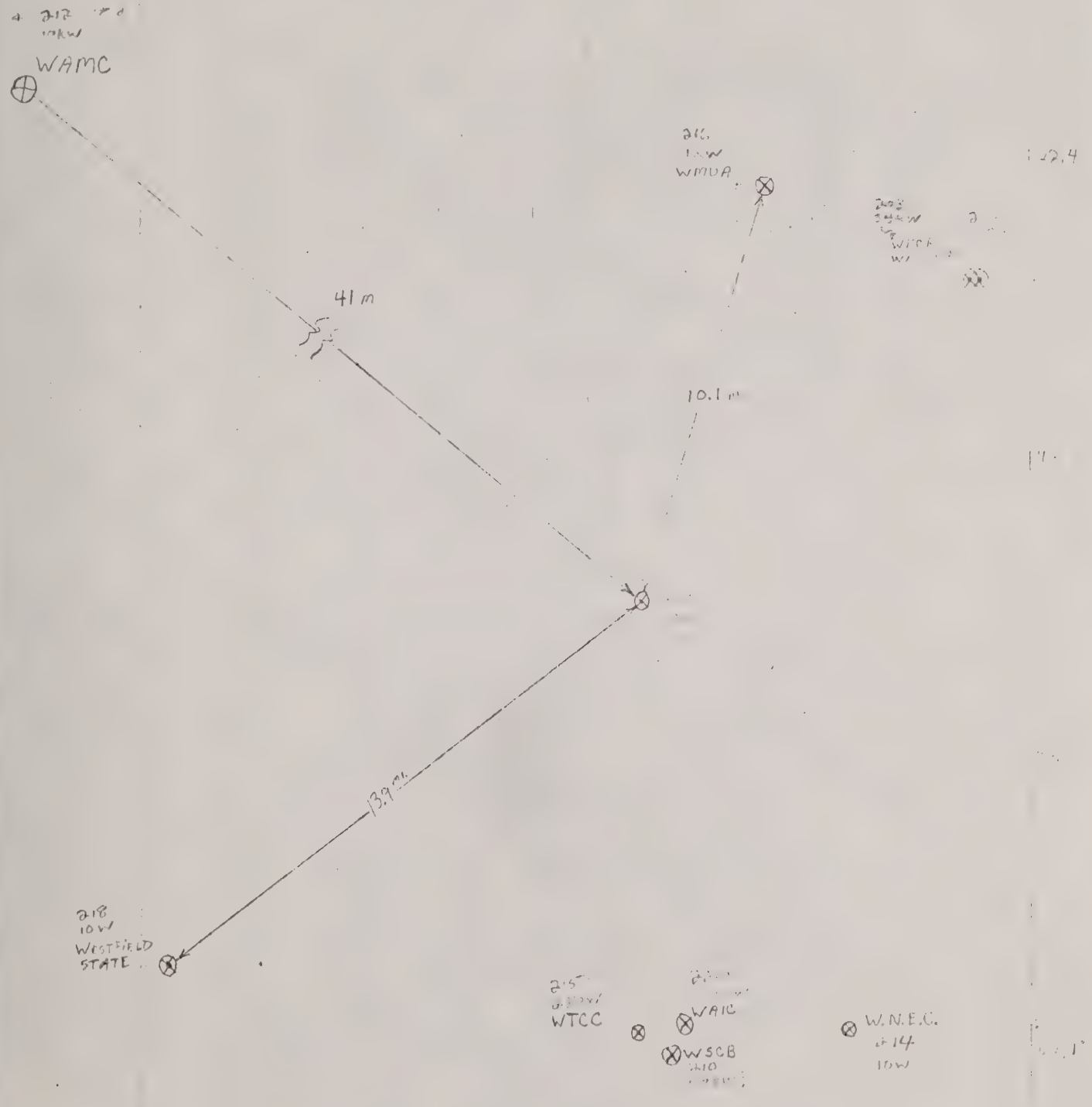
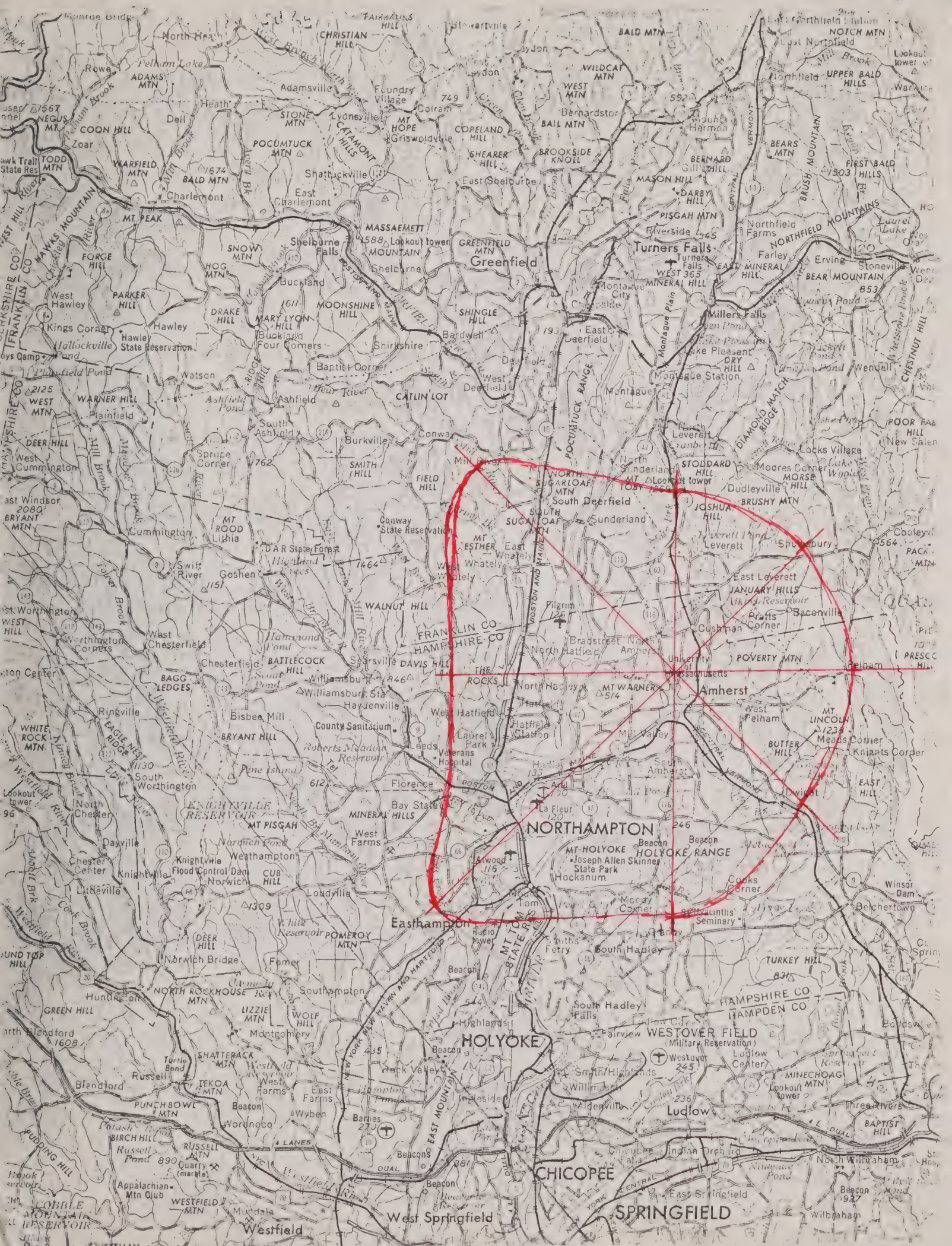


FIGURE 1

60dbu service contours for
WMUA CH.216 (91.1 MHZ)
Amherst, Mass.

MAP OF FM EDUCATIONAL STATIONS WHICH LIMIT FREQUENCY & POWER ALLOCATIONS OF WAMC




NORTHAMPTON
HOLYOKE
CHICOPEE
SPRINGFIELD
Easthampton
West Springfield
Westfield
Amherst
Greenfield
Turners Falls
Montague
Deerfield
Sunderland
Hadley
South Hadley
Ludlow
Belchertown
Wilbraham
FRANKLIN CO
HAMPSHIRE CO
HAMPDEN CO
MT TOM STATE RESERVATION
WESTOVER FIELD
(Military Reservation)
MT-HOLYOKE
HOLYOKE RANGE
Joseph Allen Skinner
State Park
Hockanum
Conway
State Reservation
D A R State Forest
Hawley
State Reservation
Hallockville
Pond
Plainfield
Pond
Ashfield
Pond
Hammond
Pond
Scout
Pond
Roberts Meadow
Reservoir
Pine Island
Reservoir
KNIGHTVILLE
RESERVOIR
Norwich
Pond
White
Reservoir
Russell
Pond
Wyben
Pond
Lake Pleasant
Pond
Wendell
Pond
Laurel Lake
Leverett
Pond
Lake Pleasant
Pond
Locks Village
Pond
Wright
Pond
Three Rivers
Pond
Indian Orchard
Pond
Mill River
Fort River
Hop Brook
Roaring Brook
Cold River
Green River
Deerfield River
Connecticut River
Westfield River
Chicopee River
Swift River
Fuller Brook
Cooks Brook
Manhan River
Broad Brook
Mill Brook
Bear River
Dry Brook
Tully Brook
Keet Brook
Pelham Brook
Smith Brook
Chickley River
Hawks Mountain
Mt Peak
Todd Mtn
Negus Mtn
Coon Hill
Warfield Mtn
Bald Mtn
Pocumtuck Mtn
Catamount Hills
Stone Mtn
Mt Hope
Griswoldville
Copeland Hill
Shearer Hill
Brookside Knoll
Ball Mtn
Wildcat Mtn
West Mtn
Bald Mtn
Notch Mtn
Upper Bald Hills
Bears Mtn
Brush Mountain
First Bald Hills
Mason Hill
Darby Hill
Pisgah Mtn
Northfield Mountains
Bear Mountain
Stoneville
Chestnut Hill
Poor Hill
New Salem
Mt Toby
Sugarloaf Mtn
North Sugarloaf Mtn
South Sugarloaf Mtn
Joshua Hill
Brushy Mtn
Stoddard Hill
Morse Hill
Dudleyville
Spencer Hill
Mt Esther
Mt Rood
Walnut Hill
Smith Hill
Field Hill
Deer Hill
Bryant Mtn
Warner Hill
West Mtn
Drake Hill
Parker Hill
Shingle Hill
Moonshine Hill
Mary Lyon Hill
Ridge Hill
Catlin Lot
Poverty Mtn
Mt Warner
Mt Lincoln
Butter Hill
East Hill
Pilgrim
Bradstreet
Cushman
Pratts Corner
Baconville
Means Corner
Knights Corner
Cooks Corner
Morgan
Hockanum
Atwood
La Fleur
Tom
Mt Pisgah
Bay State
Mineral Hills
Eagle Nest Ridge
Bagg Ledges
Battlecock Hill
Bare Hill
Pomeroy Mtn
Lizzie Mtn
Wolf Hill
Shattuck Mtn
Tekoa Mtn
Punchbowl Mtn
Birch Hill
Pudding Hill
Deer Hill
Green Hill
North Rockhouse Mtn
Round Top Hill
Westfield Mtn
Mt Tekoa
Mt Minechoag
Baptist Hill
Chestnut Hill
Poor Hill
Pack Mtn
Cooleyville
Locks Village
Moores Corner
Millers Falls
Montague City
Montague Plain
Montague Station
Leverett
Shutesbury
East Leverett
January Hills
Baconville
Poverty Mtn
Pelham
West Pelham
Amherst
South Amherst
Mill Valley
Hatfield
Hatfield Station
West Hatfield
North Hatfield
Whately
East Whately
South Deerfield
East Deerfield
West Deerfield
Montague
Turners Falls
Greenfield
Shelburne Falls
East Shelburne
Charlemont
East Charlemont
Shattuckville
Buckland
Four Corners
Shirkshire
Bardwell
Baptist Corner
Watson
Ashfield
South Ashfield
Burkville
Conway
Spruce Corner
Cummington
Goshen
Williamsburg
Williamsburg Sta
Haydenville
Leeds
Veterans
Hospital
County Sanitarium
Bisbee Mill
Ringville
Chesterfield
West Chesterfield
Worthington
Worthington Corners
South Worthington
North Chester
Chester Center
Daxville
Knightville
Littleville
Loudville
Norwich Bridge
Fomer
Southampton
Westhampton
Knightville
Flood Control Dam
Norwich
Cub Hill
Florence
Bay State
West
Farms
Nonotuck
Pond
Mt Pisgah
Mineral Hills
Leeds
Veterans
Hospital
Laurel
Park
Hatfield
Station
Mill Valley
South
Amherst
West
Pelham
Means Corner
Knights Corner
Cooks Corner
Morgan
Hockanum
Atwood
La Fleur
Tom
Mt Tom
Mt Tom State
Reservation
Radio
Tower
Smiths
Ferry
South Hadley
Falls
Fairview
Westover
Ludlow
Center
Smith Highlands
Willimansett
Aldenville
Chicopee
Falls
East Springfield
North Wilbraham
Pond
Beacon
Hill
Highland St
Beacon
Rock Valley
Beacon
Woronoco
Barnes
Beacons
Beacon
Mundale
Appalachian
Mtn Club
Quarry
(marble)
Russell
Bland ford
Turtle
Bend
West
Farms
East
Farms
Wyben
Woronoco
Barnes
Beacons
Beacon
Mundale
Westfield
Russell
Pond
Russell Mtn
Birch Hill
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Burkville
Conway
Spruce Corner
Cummington
Goshen
Williamsburg
Williamsburg Sta
Haydenville
Leeds
Veterans
Hospital
County Sanitarium
Bisbee Mill
Ringville
Chesterfield
West Chesterfield
Worthington
Worthington Corners
South Worthington
North Chester
Chester Center
Daxville
Knightville
Littleville
Loudville
Norwich Bridge
Fomer
Southampton
Westhampton
Knightville
Flood Control Dam
Norwich
Cub Hill
Florence
Bay State
West
Farms
Nonotuck
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Mt Pisgah
Mineral Hills
Eagle Nest Ridge
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Battlecock Hill
Bare Hill
Pomeroy Mtn
Lizzie Mtn
Wolf Hill
Shattuck Mtn
Tekoa Mtn
Punchbowl Mtn
Birch Hill
Pudding Hill
Deer Hill

DEC 13 1973

FCC Form 340
August 1969

Form Approved
Budget Bureau No. 52-R097.14

Section I

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

APPLICATION FOR AUTHORITY TO CONSTRUCT OR MAKE CHANGES IN A NONCOMMERCIAL EDUCATIONAL TV, FM, OR STANDARD BROADCAST STATION

INSTRUCTIONS

A. This form is to be used only in applying for authority to construct a new noncommercial educational TV, FM, or Standard broadcast station or to make changes in an existing station. This form consists of this part, Section I, and the following sections:

Section II, Legal Qualifications of Broadcast Applicant

Section III, Financial Qualification of Broadcast Applicant

Section IV, Statement of Program Service of Broadcast Applicant

Section V-A, Standard Broadcast Engineering Data

Section V-B, FM Broadcast Engineering Data

Section V-C, Television Broadcast Engineering Data

Section V-G, Antenna and Site Information

B. PREPARE THREE COPIES of this form and all exhibits. Sign one copy of Section I. Prepare one additional copy (a total of four) of Section V-G and associated exhibits. File all the above with the Federal Communications Commission, Washington, D. C. 20554.

C. Number exhibits serially in the space provided in the body of the form and list each exhibit in the space provided on page 2 of this Section. Show date of preparation of each exhibit, antenna pattern, and map, and show date when each photograph was taken.

D. The name of the applicant stated herein shall be the exact corporate name, if a corporation; if an unincorporated association, the exact name of the association; if a governmental or public educational agency, the exact name of such agency. The applicant must notify the Commission of any change of address.

E. Information called for by this application which is already on file with the Commission need not be refiled in this application provided (1) the information is now on file in another application or FCC form filed by or on behalf of this applicant; (2) the information is identified fully by reference to the file number (if any), the FCC form number and the filing date of the application or other form containing the information and the page or paragraph referred to, and (3) after making the reference, the applicant states: "No change since date of filing." Any such reference will be considered to incorporate into this application the application or other form referred to in its entirety. Do not incorporate by reference any material which is not to be open to the public.

F. This application shall be personally signed by the applicant, if the applicant is an individual; by one of the partners, if the applicant is a partnership; by an officer, if the applicant is a corporation; by a member who is an officer, if the applicant is an unincorporated association; by such duly elected or appointed officials as may be competent to do so under the laws of the applicable jurisdiction, if the applicant is an eligible government entity; or by the applicant's attorney in case of the applicant's physical disability or of his absence from the United States. The attorney shall, in the event he signs for the applicant, separately set forth the reason why the application is not signed by the applicant. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true.

G. Before filling out this application, the applicant should familiarize himself with the Communications Act of 1934, as amended, Parts 1, 2, 17, and 73 of the Commission's Rules and Regulations.

H. BE SURE ALL NECESSARY INFORMATION IS FURNISHED AND ALL PARAGRAPHS ARE FULLY ANSWERED. IF ANY PORTIONS OF THE APPLICATION ARE NOT APPLICABLE, SPECIFICALLY SO STATE. DEFECTIVE OR INCOMPLETE APPLICATIONS MAY BE RETURNED WITHOUT CONSIDERATION.

FOR COMMISSION USE ONLY

File No.

1. Name of applicant (See Instruction D)

The President and Trustees of Mount Holyoke College

Street Address

Route 116

City	State	ZIP CODE
South Hadley	Mass.	

2. Name of person to whom communications should be sent, if different from item 1

Mr. Arthur Chase

Street Address

3 Chem Lab Building - Mount Holyoke

City	State	ZIP CODE
South Hadley	Mass.	

3. Purpose of application (check one)

☐ New Station ☒ Change existing station facilities

4. (a) Requested facilities

Type of station (as Standard, FM, Television)

Frequency and antenna change.
Redetermination of geographic coordinates

Frequency	Channel No.	Call sign
91.5 MHz	218D	WMHC

Effective radiated power in kilowatts, or power for standard broadcast stations	Antenna height above average terrain in feet (FM and TV only)
19 watts	Not applicable

Location of main studio

State	City
Massachusetts	South Hadley

Location of transmitter

State	County	City
Massachusetts	Hampshire	South Hadley

Number and street (or other indication of location)

Laboratory Theater - Mt. Holyoke Campus

b. If this application is for changes in an existing authorization, complete Section I and any other sections necessary to show all substantial changes in information filed with the Commission in prior applications or reports. In the spaces below check Sections submitted herewith and as to Sections not submitted herewith refer to the prior application or report containing the requested information in accordance with Instruction E.

Section No.	Para. No.	Reference (File or Form No. and Date)
☐ Section II		See latest license renewal
☐ Section III		
☐ Section IV		
☒ Section V-B		

Have there been any substantial changes in the information incorporated in this application by reference in this paragraph? Yes ☐ No ☒

If "Yes," submit as Exhibit No. N/A full particulars.

Is this application filed for the purpose of impeding, obstructing or delaying determination on any other application with which it may be in conflict? Yes ☐ No ☒

If "Yes," detail full particulars:

FCC Form 340 | FEDERAL COMMUNICATIONS COMMISSION | Section V-B

FM ENGINEERING DATA | Name of applicant: President and Trustees of Mount Holyoke College | FOR COMMISSION USE ONLY File No.

1. Purpose of authorization applied for:

☐ Construct a new station ☒ Make changes in authorized radio station

If this is not for a new station, summarize briefly the nature of the changes proposed. Change frequency from Channel 214 (90.7 MHz) to Channel 218 (91.5 MHz); Install 4 bay circularly polarized antenna tuned to 91.5 MHz, Redefination of Geographic Coordinates from 42° 16' 01" N. Lat. and 72° 34' 07" W. Long. to 42° 15' 9.5"N. Lat. and 72° 34' 36" W. Long.

2. Facilities requested

Frequency	Transmitter power output
91.5 MHz	10 watts

3. Proposed transmitter location

State	County	City
Massachusetts	Hampshire	S. Hadley

Street Address (or other identification)
Laboratory Theater Building on the Mount Holyoke College Campus

Remote control point location

State	City or town

Street Address (or other identification)

4. Proposed location of main studio

State	County
Massachusetts	Hampshire

City or town	Street Address
South Hadley	Laboratory Theater

Other studios proposed
None

5. Transmitter

Make: Gates

Type No.	Rated Power
BFE-10C	10 watts

(If the above transmitter has not been accepted for licensing by the F.C.C., attach as Exhibit No. N/A a complete showing of transmitter details. Showing should include schematic diagram and full details of frequency control. If changes are to be made in licensed transmitter include schematic diagram and give full details of change.)

6. Transmission line proposed to supply power to the antenna from the transmitter

Make	Type No.	Description
Heliax	HJ2-50	Air Dielectric Cable

Size (nominal transverse dimension) in inches	Length in feet	Rated efficiency in percent for this length
3/8 inch	50 feet	91%

7a. Antenna structure

Is the proposed construction in the immediate vicinity or does it serve to modify the construction of any standard broadcast station, FM broadcast station, television broadcast station, or other class of radio station? ☐ Yes ☒ No
If "Yes", attach as Exhibit No. N/A complete engineering data thereon.

Submit as Fig. 1 a vertical plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features.

Overall height in feet above ground. (Without obstruction lighting)	Overall height in feet above mean sea level. (Without obstruction lighting)
93 feet	288 feet

Overall height in feet above ground. (With obstruction lighting)	Overall height in feet above mean sea level. (With obstruction lighting)
No obstruction lighting is required.	

Height of antenna radiation center in feet above mean sea level.
273 feet

Geographical Coordinates of Antenna (To nearest second)

North Latitude	West Longitude
42° 15' 9.5"	72° 34' 36"

b. Antenna data

Make	Type No. or description	No. of sections
CCA Electronics	6812 - 4	4

Effective free space field intensity at one mile in mv/m for one kilowatt antenna input power	Antenna field gain	Antenna power gain
198	1.43	2.05

Is horizontal polorization proposed? ☒ Yes ☐ No
If "No", attach as Exhibit No. complete engineering data on the antenna and the effective radiated power proposed.

Is directional antenna proposed? ☐ Yes ☒ No
If "Yes", attach as Exhibit No. complete engineering data thereon.

8. Attach as Exhibit No. On File a map(s) topographic where obtainable, such as U.S. Geological Survey quadrangles, for the area within 15 miles of the proposed transmitter location and shown thereon the transmitter and main studio locations accurately plotted.

9. Attach as Exhibit No. On File a sufficient number of aerial photographs taken in clear weather at approximately altitudes and scales to show the nature of the surrounding terrain in the vicinity of the proposed transmitter site. The photographs must be marked so as to show prominent features. Photographs taken in eight different directions to the nearest point on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown. Give date photographs were taken.

NOTE: The information requested below in paragraphs 10, 11, 12, 13 and 14, need only be completed by those stations proposing to use transmitters with power ratings in excess of 10 watts.

10. Proposed operation

Transmitter power output in kilowatts	Power dissipation within transmission line in kilowatts
Antenna input power in kilowatts	Effective radiated power in kilowatts

11. Modulation monitor

Make	Type No.

12. Frequency monitor

Make	Type No.

13a. On the topographic map required by Paragraph 8, show drawn thereon the following data:

(1) Transmitter location and call letters of all known radio stations (except amateur) and the location of established commercial and government receiving stations within 2 miles of the proposed transmitter location;

(2) Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature;

(3) At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location.

b. Attach as Exhibit No. _____ profile graphs for the radials in (a) (3) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction true north shall be zero azimuth and angles measured clockwise. Show source of topographical data on each. Show scale of miles.

14. From the profile graphs in 13(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the FM Technical Standards, supply the following tabulation of data: (If proposed location is adjacent to the sea coast or the Great Lakes omit from this tabulation all radials which lie over water substantially the entire distance between two miles from the proposed transmitter location and the predicted 50 microvolt per meter contour.)

Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10-mi.)	Free space field intensity in millivolts per meter at one mile	Predicted distance in miles to the 1 mv/m contour	Predicted distance in miles to the 50 uv/m contour
0	_____ feet	_____ feet	_____ mv/m	_____ mi.	_____ mi.

Antenna height above average terrain _____ feet
(Average of above listed heights)

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Date December 13, 1973

Signature _____
(check appropriate box below)

- [ ] Technical Director
- [ ] Chief Operator
- [ ] Registered Professional Engineer
- [x] Consulting Engineer

December 6, 1973

Mr. Ray Paul
815 15th Street, N. W.
Washington, D. C. 20015

Dear Mr. Paul:

We certainly appreciate your willingness to advise Mount Holyoke College concerning a change of frequency of its FM campus radio station (WMHC) from channel number 214 to channel number 218.

While we have not yet done so, we expect to join with Springfield Technical Community College in application to HEW for Educational Broadcast Facilities from which Springfield Tech expects to provide some financial assistance to Mount Holyoke for this change.

Enclosed is a study of the merits of this transfer prepared by Mr. Edward F. Perry, Jr. of Educational FM Associates. Also note an Amendment No. 1 which contains revisions thereto.

While Mount Holyoke could simultaneously apply for increased wattage for the station on channel 218, we have not yet decided to do so. We would appreciate your advice concerning what additional FCC regulations might apply should we increase power to 100 watts. Also we have no professionals employed with respect to this station and would not have a summer operation.

At present part of the consideration for Mount Holyoke making this change of channels is that Springfield Tech has agreed to provide us without charge a more powerful antenna which will permit us to nearly double power without adding to the basic 10-watt transmitter.

I understand that Mr. Perry will represent Springfield Tech with respect to the engineering aspects of this proposed change. He has advised me that he may retain a Mr. Frank Martin of Sutherland, Asbill and Brennan in Washington for legal services.

Mr. Perry advised me today that the application for the HEW grant must be on file by December 14, 1973 and that he will simultaneously file with FCC for a change in frequency of the Springfield Tech station from FM channel 215 to channel 214. He also advised me that since Mount Holyoke College now holds a license on FM channel 214, it could

December 6, 1973

Mr. Ray Paul
815 15th Street, N. W.
Washington, D. C. 20015

Dear Mr. Paul:

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Holyoke College concerning a change of frequency at its FM campus
radio station (WMHC) from channel number 214 to channel number 218.

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Technical Community College in application to HEW for Educational
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Ashill and Brennan in Washington for legal services.

Mr. Perry advised me today that the application for the FCC grant
must be in file by December 14, 1973 and that he will simultaneously
file with FCC for a change in frequency of the Springfield Tech station
from FM channel 218 to channel 214. He also advised me that since
Mount Holyoke College now holds a license on FM channel 214, it could

receive a construction permit for channel 218 but subsequently decide to remain on 214 if the Springfield Tech application was not approved. Your verification of this latter statement would be appreciated.

We look forward to hearing from you.

Sincerely,

M. E.

Merrill Ewing
Treasurer and
Business Manager

cc: Artner Chace
Wayne Gass

ME/gm
Enclosures

Mr. Jay Ford — Page 2 — December 8, 1971

receive a construction permit for channel 218 but subsequently having to transmit on 218 if the Springfield Tech application was not approved. Your verification of this latter statement would be appreciated.

We look forward to hearing from you.

Sincerely,

Merrill Eden
Treasurer and
Business Manager

cc: Arthur Chace
Wayne Case

ME\gm
Enclosure

DEC 13, 1973

ENGINEERING EXHIBIT - RADIO STATION WMHC-FM

1. This Engineering Exhibit has been prepared on behalf of the President and Trustees of Mount Holyoke College, licensee of FM Broadcast Station WMHC in South Hadley, Massachusetts, to support a request for a change in operating frequency and installation of a new antenna and feed line system. Also, we determined that the licensed geographic coordinates of WMHC are in error. A corrected set of coordinates contained as part of this Engineering Exhibit.

2. WMHC is currently licensed to operate on FM Channel 214D with a transmitter output of ten watts and a single bay antenna. The changes requested herein would change the WMHC operating frequency from FM Channel 214 to Channel 218 and replace the current antenna with a four bay circularly polarized unit. The change in frequency will permit acceptance of an application by Educational FM Station WTCC-FM in Springfield, Massachusetts for a change in frequency from Channel 215 to Channel 214 and a power increase from ten watts to 3.25 kilowatts.

3. The allocation study relative to the use of Channel 218 by WMHC, detailed in the following paragraphs, was predicated on a transmitter location at 42° 15' 9.5" North Latitude and 72° 34' 36" West Longitude. The site proposed is the same as the one currently in use by WMHC. The difference

between the licensed and proposed coordinates is due to an error which was made in originally determining the location of the WMHC antenna site.

4. The following facilities were studied relative to the Channel 218 allocation sought by WMHC.

a. Channel 215. WT C in Springfield, Massachusetts currently operates on this frequency as a Class D facility. However, concurrent with the filing by WMHC for amended facilities, WTCC is filing a request to change its operating frequency from Channel 215 to Channel 214 and to increase power. Thus, WTCC is not considered a factor in this study. There are no other stations operating on Channel 215 in the area under consideration.

b. Channel 216. WMUA in Amherst, Massachusetts currently operates on Channel 216A with one kilowatt of power and an antenna height above average terrain at a bearing toward WMHC of approximately 220 feet. At this bearing the WMUA 60 dbμ contour extends 9.3 miles. The proposed WMHC 80 dbμ contour reaches less than 0.8 miles. Since WMUA and WMHC are 10.1 miles apart, there will be no prohibited overlap of contours. Actually, since WMHC is proposing to remain 400 kHz removed from WMUA, a study of WMUA is required only because of the new antenna installation proposed by WMHC, not because of the proposed frequency change. There are no other stations in the area operating on Channel 216.

c. Channel 217. WWUH in West Hartford, Connecticut operates on this frequency as a Class A facility. The channel is also occupied by WCWL in Stockbridge, Massachusetts which operates as a Class A station. Both stations are more than thirty miles removed from WMHC and no prohibited overlap of contours will occur. The are no other assignments on Channel 217 in the area.

d. Channel 218. Westefield State College in Westfield, Massachusetts recently received a Construction Permit for a new Class D station to operate on this channel in Westfield. The Westfield site is approximately 14 miles from WMHC and at least four miles separate any prohibited overlap of contours. WRPI in Troy, New York also operates on Channel 218 as a Class B facility. At a bearing toward WMHC, the WRPI 40 dbμ interference contour reaches 59.5 miles and the WMHC proposed 60 dbμ contour reaches 2.3 miles toward WRPI. WRPI and WMHC are more than 64 miles apart, thus no prohibited overlap of contours can occur. No other stations operate on Channel 218 in the Western New England area.

e. Channel 219. The only assignment on this channel in the area is WHUS which operates with 3.12 kilowatts of power in Storrs, Connecticut. WMHC is more than thirty miles from WHUS and no prohibited overlap of contours is predicted.

f. Channel 220. The only station operating on this frequency in the area is WAIC which is licensed for 230 watts of power at Springfield, Massachusetts. WMHC and WAIC are approximately ten miles apart and

no prohibited overlap of contours is predicted.

g. I. F. Separation - Channels 271 and 272. WMHC is located approximately 13 miles from station WAQY-FM which operates on Channel 271B. This distance exceeds the ten miles "A to B" spearation required by the Commission's Rules. Channel 272A is unassigned and unassignable within twenty miles of WMHC.

4. As noted earlier in this exhibit, the frequency change proposed by WMHC will be in the public interest in that it will permit WTCC in Springfield, Massachusetts to change frequency and substantially increase its facilities thus rendering greater service to the Western New England area. The freuqency change will also serve to eliminate interference now being caused by WMHC to WAMC which operates on Channel 212B-C from a transmitter site in Adams, Massachusetts. At the present time, the WMHC site lies within the WAMC 60 dbμ service contour and under the Commission's present allocation standards, were WMHC to apply for a new Class D facility on Channel 214, the application could not be accepted without a waiver. The proposed frequency change will bring the WMHC operation into complete compliance with all of the Commission's technical allocation standards.

5. Figure 1, contained as part of this Exhibit, illustrates the proposed antenna and antenna support system. New Section V-B and V-G data from FCC Form 340 is also submitted herein. Also included is a copy of FCC Form 714.

6. In view of the foregoing considerations, we conclude that the changes requested by WMHC are in full compliance with the applicable technical allocation standards of the Commission.

EDUCATIONAL FM ASSOCIATES

by: Edward F. Perry, Jr.

dated: December 13, 1973

December 14, 1973

Mr. Ray Paul
815 15th Street, N. W.
Washington, D. C. 20015

Dear Mr. Paul:

We have enclosed for your review a photocopy of the proposed application to change our campus radio station from Channel 214 to 218. The application has been prepared by a Mr. Edward Perry, Jr. who has been retained by Springfield Technical Community College to assist us because of their interest in applying for increased power for their station.

Springfield Technical Community College has received permission to delay the application 48 hours to Tuesday, December 18, 1973. I would like to call your office on Monday afternoon in order to have your advice and counsel concerning whether or not there is any objection to my signing this application on behalf of Mount Holyoke College.

While we certainly regret the shortness of the time provided for you to review this application, I hope you will be able to assist us. While Mount Holyoke College will file this as a separate application to FCC, it is necessary for Springfield Tech to know that we will sign this application because they are applying simultaneously to FCC for a change of frequency and to HEW for a grant for this purpose.

May I thank you in advance for your assistance.

Sincerely,

Merrill E.

Merrill Ewing
Treasurer and
Business Manager

cc: Artner Chace
Wayne Gass

ME/gm
Enclosure

Merrill Ewing
Treasurer and
Business Manager

Springfield
Technical Community College

ARMORY SQUARE, SPRINGFIELD, MASSACHUSETTS 01105 • TELEPHONE: (413) 781-6470

DEAN OF
ACADEMIC AFFAIRS

December 17, 1973

Dr. Merrill Ewing
Skinner Hall
Mount Holyoke College
South Hadley, Massachusetts

Dear Dr. Ewing:

To confirm my conversation with you of December 17, 1973, the following will be Springfield Technical Community College's commitment to Mount Holyoke College re the change of frequency of radio station WMHC from the present channel number 214 to channel number 218.

1. Four bay circularly polarized antenna tuned to channel 218.

2. The returning of your present transmitter including a new crystal for channel 218.

3. To complete all necessary engineering requirements for the FCC application to change frequency to channel 218.

The above agreement is contingent on: (1) FCC approval of the changes in frequency for WTCC on channel 214 and WMHC on channel 218; (2) acceptance of an HEW grant for educational broadcast facilities.

Sincerely,

Richard G. Labrie

Richard G. Labrie
Administrative Assistant to the
Dean of Academic Affairs

co
cc: President Edmond P. Garvey
Dr. Gilbert M. Rosenbrier, Dean of
Academic Affairs
Mr. John J. Fortsch, Dean of Administration
Mr. Art Chase, Mount Holyoke College

December 18, 1973

Mr. Ray Paul
815 15th Street, N. W.
Washington, D. C. 20015

Dear Mr. Paul:

Many thanks for your telephone call approving our signing of an application to FCC to change the frequency of our FM Station from Channel 214 to Channel 218. The application is unchanged from that which we provided you earlier except that Page 2 of Section 1 has now been signed. A photocopy of this page is enclosed for you to insert with the photocopy of the application forms previously supplied to you.

I understand that the application, together with the application of Springfield Technical Community College, will be handcarried to FCC this afternoon by Mr. Edward F. Perry, Jr. of Educational FM Associates.

I raised the question of the antenna heighth with representatives of STCC and they advised me that as long as our transmitter power remains at 10 watts, the FCC has little or no interest in antenna heighths. They, of course, understand that we do not expect to increase the heighth of our antenna unless we receive the four bay antenna and choose to move the location to another campus building.

We certainly appreciate the reassurances you have provided to Mount Holyoke College and we expect to reimburse you for your services. Your bill should be addressed to my attention.

Thank you again and best wishes for the holiday season.

Sincerely,

M. E.

Merrill Ewing

cc: Wayne Gass
✓ Artner Chace

ME/gm
Enclosure

December 18, 1973

Mr. Ray Paul
815 15th Street, N. W.
Washington, D. C. 20015

Dear Mr. Paul:

Many thanks for your telephone call approving our signing of an application to FCC to change the frequency of our FM Station from Channel 214 to Channel 218. The application is unchanged from that which we provided you earlier except that Page 2 of Section I has now been signed. A photocopy of this page is enclosed for you to insert with the photocopy of the application forms previously supplied to you.

I understand that the application, together with the application of Springfield Technical Community College, will be handcarried to FCC this afternoon by Mr. Edward F. Perry, Jr. of Educational FM Associates.

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We certainly appreciate the reassurances you have provided to Mount Holyoke College and we expect to reimburse you for your services. Your bill should be addressed to my attention.

Thank you again and best wishes for the holiday season.

Sincerely,

Merrill Ewing

cc: Wayne Gaae
Artner Chace

ME\gm
Enclosure